

Journal
June 1884 -
Sept 1885

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STATIONERS & PRINTERS
293 & 295 Broadway,
NEW YORK.

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34 = " 8

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32 = " 15

59 = " 8

2 = May 6

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6 = " 23

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56 = June 8

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63 = " 16

65 = " 26

7 = July 15

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46 = " 26

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50 = " 13

4 = Aug. 10

3 = " 10

12 = " 12

13 = " 12

41 = " 15

44 = " 19

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114 ~~24~~ = 3 11

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116 ~~26~~ = 13 12

117 ~~27~~ = 4 13

118 ~~28~~ = 44 4

119 ~~29~~ = 46 44

120 ~~30~~ = 14 46

221 ~~34~~ = 47 14

94	94	32	<u>Tamias harrisi</u>	♂ ad.	Apr. 15
107	107	33	" "	♀ juv.	July 2
	125	34	" "	♂ ad.	Sept. 10
	129	35	" "	♂ ad.	" 19
	130	36	" "	♀ juv.	" 19
	150	37	" "	♂ ad.	Nov. 16
	151	38	" "	♀ ad.	Nov. 20
	152	39	" "	♀ ad.	do
	153	40	" "	♀ ad.	do
	91	41	<u>Spermophilus grammurus grammurus</u>	♂ ad.	Mar. 22
98	98	42	" "	♂ ad.	May 8
99	98	43	" "	♂ ad.	" 9
	119	44	" "	♀ ad.	Aug. 16.
	96	45	<u>Cynomys columbianus</u>	♀ ad.	Apr. 25
	120	46	<u>Castor fiber canadensis</u>	♂ ad.	Aug. 16.
	122	47	" "	♀ juv.	" 19
	123	48	" "	♂ juv.	Sept. 4.
109	108	49	<u>Mus musculus</u> Linnaeus. House Mouse.	♂ ad.	July 13
108	107	50	" "	♀ juv.	July 13
	132	51	" "	♂ (ad?)	Sept. 21.
	142	52	<u>Giant Cactus Mouse</u> <u>Peromyscus eremicus</u>	♀ ad.	Oct. 22.
	143	53	" "	♀ juv.	" 22.
		54	<u>Kangaroo-Rat</u> " " "	♂ juv.	Dec. 7
	131	55	<u>Perognathus penicillatus</u> , Woodh.	♀	Sept 20
103	102	56	<u>Thomomys talpoides umbrinus</u>	♂ ad.	June 8.
	149	57	" "	♀	Nov. 15
	148	58	<u>Lepus sylvaticus mittalli</u>	♂ ad.	Nov. 15
	92	59	" " <u>arizonae</u>	♂ ad.	Apr. 8.
	102	60	" "	♂ juv.	May 26
	105	61	" "	♀ juv.	June 26
	126	62	" "	♀ ad.	Sept. 11.
	104	63	" <u>calotis texiana</u>	♀ juv.	June 16
	128	64	" "	♂ juv.	Sept. 14
	106	65	<u>Fiber zibethicus</u>	♂	June 26.

- 147 # Swift Fox. Urocyon cinereoargenteus scottii ad. Nov. 12, 1884
- 97 # Little Bat. Myotis guianensis (p. 28.) ♂ ad. May 6
- 100 # Antrozous pallidus,
Long-eared Bat. (No. . (p. 300.) ♀ ad. }
101 # Antrozous pallidus (p. 300.) ♀ ad. } May 23.
- ~~Little Bat. No. 5. (p. 28.) ♂ ad.~~
- 110 ~~109~~ # Corynorhinus macrotis pallescens Muller,
Long-eared Bat. (No. 3113 ♀. (p. 139.) ♀ (juv.?) July 15.
- 111 ~~110~~ # Antrozous pallidus 3157 ♀. (p. 149.) ♀ juv. July 26
- 112 # " 3157 ♂. (") ♂ juv. July 26
- 113 # " 3157 ♀. (") ♀ juv. July 26
- 114 # " 3188 ♀. (p. 163.) ♀ ad. Aug. 10
- 115 # Myotis guianensis
Little Bat. " 3188 ♂. (p. 163.) ♂ (ad.?) Aug. 10.
- 116 # Antrozous pallidus,
Long-eared Bat. " 3188 ♀. (p. 163.) ♂ ad. Aug. 12.
- 117 # Antrozous pallidus 3188 ♂. (p. 163.) ♂ ad. Aug. 12.
- 118 # Myotis lucifugus (longicrus?)
Little Long-eared Bat. " 3204 ♀. (p. 168.) ♀ ad. Aug. 15.
- 121 # Antrozous pallidus
Long-eared Bat. " 3225 ♂. (p. 174.) ♂ juv. Aug. 19.
- 124 # Antrozous pallidus 3307 ♀. (p. 197.) ♀ ad. Sept. 10.
- 127 # " 3317 ♂. (p. 202.) ♂ ad. Sept. 14.
- 135 # Sciurus hudsonius fremonti ♀ ad. Oct. 4
- 136 # " " " ♀ ad. Oct. 4
- 137 # " " " ♂ ad. Oct. 5
- 20 # " aberti ♂ ad. [Feb., 1884]
- 133 # " " " ♂ juv. Oct. 4
- 138 # " " " ♂ ad. " 5
- 139 # " " " ♂ ad. " 5
- 140 # " " " ♀ ad. " 7
- 141 # " " " ♂ ad. " 8
- 144 # " " " ♀ ad. " 25
- 145 # " " " ♀ ad. " 25
- 134 # Tamias asiaticus quadrivittatus. ♂ ad. " 4
- 95 # " " dorsalis. ♀ ad. Apr. 21.
- 146 # " " " ♀ ad. Nov. 11.
- 93 # " harrisi ♂ ad. Apr. 8.

"33702."

Tamias asiaticus quadrivittatus. Rocky Mountain Chipmunk. ♂ ad. Baker's Butte, Mogollon Mts., 35 miles east of Ft. Verde, A. T., October 4th, 1884.

Nose to eye, 17; ear, 30; occiput, 38; root of tail, 140; end of outstretched hind-leg, 210. Forearm, 24; fore-foot + cl., 18; cl., 5. Leg, 37; hind foot + cl., 33; cl., 4.5. Between eyes, 15. Ears, height above skull, 19; from meatus, 19; width 14. Tail from root to end of vertebræ, 96; hairs, 120; ears pointed. Shot in a tree!

"34792."

Tamias asiaticus dorsalis. Lila Chipmunk.

♀ (ad?). Shot at the head of Cataract Creek, near the Supai Indian settlement, Northern Arizona, November 11th, 1884. Total length ^(=241 mm) 9.50 inches. Tail from root to end of vertebræ, ^{95 mm} 3.75; hairs ^{117 mm} 4.60; nose to eye, ^{11.5 mm} 4.5; ear, ^{30.5 mm} 1.20; occiput, ³⁷ 1.45; root of tail, ^{124.5 mm} 4.90; end of outstretched hind-leg, ¹⁸³ 7.20. Ears, height above skull, ^{16.5} 6.5; meatus, ^{20.5} 8.0; width, ^{11.5} 4.5. Fore-arm, ²³ 9.0; fore-foot + cl., ¹⁶ 6.4; Leg, ³⁴ 1.35; hind-foot, ^{30.5} 1.20.

The sides are strongly fulvous and size small.

Allen's birthday is Jan. 16th.

Shot among the broken rocks at the base of the Canon-wall, beneath mezquite-bushes. It uttered a rather loud and curious note. See remark on p. 398. of Allen's Mon. Liriodendron No. 3385 etc.

"8" p. 28 of Journal.

Tamias asiaticus dorsalis, ♀ ad. Shot on the top of the mountain behind Whipple Barracks, in pine timber, April 21st, 1884. Nose to eye, 17; ear, 32; occiput, 41; root of tail, 145; end of tail (hairs) 272. Tail from root to end of vertebræ, 95; hairs, 127. Fore-foot, 18.3; its longest claw, 4. Hind-foot, 31; its longest claw, 5. Distance between outstretched foreclaws, 14.5. Fore-arm, 23. Leg, 39.5. Shot on the limb of a prostrate pine-tree, a few feet from the ground.

6th 28th of Journal. * Tamias harrisi (Aud. and Bach.) Allen. Harris's Chipmunk. ♂ ad. Fort Verde, A. T. April 8th, 1884. Shot by Mrs. Meams. This is the first one I ever saw! It ran in a hole beneath a mesquite bush and came out again when I called it making a screeching sound. Nose to eye, 17.4; ear, 36; occiput, 43; root of tail, 172; end of outstretched hind-leg, 255; end of tail (hairs), 277. Fore-arm, 24; fore-foot, 23.5; its longest claw, 8. Leg, 39; hind-foot, 36.4; its longest claw, 8. Tail from root to end of vertebrae 86; hairs, 112.

7th 28th of Journal. Tamias harrisi (Aud. & Bach.) Allen. ♂ ad. Fort Verde, A. T., April 15th, 1884. Nose to eye, 17.5; ear, 35; occiput, 42; root of tail, 155; end of outstretched hind-leg, 236; tip of hairs of tail, 259; Tail from root to end of vertebrae, 80; hairs, 104. Distance between fore-claws across shoulders, 162. Fore-arm 25; fore-foot, 22; longest cl., 6.5. Leg, 33; hind-foot, 35; longest claw, 7.

Tamias harrisi (Aud. & Bach.) Allen. ♂ ad. Grand Cañon of the Colorado near Pine Springs, Arizona. November 16th, 1884. Nose to eye, .70 inches; ear, 137; occiput, 173; root of tail, 6.25. Tail from root to end of vertebrae, 2.00; hairs, 2.75. Between claws, across shoulders, 6.25. Nose to end outstretched hind-leg, 9.00. Fore-arm, 93; fore-foot, 90. Leg, 150; hind-foot, 140 (Upper incisors from gums, 12. Total length, 9.00 { Lower " " " .28. 10 Ears above skull, .30; meatus, .40; width, .40

This and 2 following
in same order
on p. 232 of Journal

Tamias harrisi (Aud. and Bach.) Allen. Harris's Chipmunk.
♀ ad. 12 miles east of Peach Springs Station on the
"A. & P." Railroad, November 20th, 1884.

[See Journal for measurements, etc.]

Tamias harrisi (Aud. & Bach.) Allen. ♀ ad. do do do.

Tamias harrisi (Aud. & Bach.) Allen. ♀ ad. do do do.

Sciurus aberti Woodh. ♂ ad. ^{Flagstaff, P. T. Mts} Bill Williams, Feb. 1884. Dr. Bishop.

"3371a"

(p. 119 of
field note-book)

Sciurus aberti Woodhouse. Abert's Pine Squirrel.

♂ juv. No measurements taken. ^{Oct. 4, 1884. Baker's} Butte, Mogollon Mts, A. T.

do p. 136

Sciurus aberti, Woodh. ♂ ad. Oct. 5, 1884. A. melano.

Shot by Genl. Geo. Crook. Mogollon Mts. bet. Genl. Sprs. & Lake Tanks, A. T.

do p. 137

Sciurus aberti, Woodh. ♂ ad. Shot by me. Oct. 5, 1884, at

Mogollon Mts., between General Springs and Lake Tanks, A. T.

do p. 157

Sciurus aberti. ♀ ad. Cañon Creek, Yonto Basin, A. T.

Oct. 7th, 1884.

do p. 166

Sciurus aberti. ♂ ad. Between Cañon Creek and Cubien

Creek, A. T. Oct. 8, 1884.

do p. 93

Sciurus aberti. ♀ ad. Mormon Town, ^{East of Strawberry} Valley, in "Pine Flat," Arizona Territory, Oct. 25-

do p. 93

Sciurus aberti. ♀ ad. Strawberry Valley, A. T. Oct. 25-

Lepus sylvaticus nuttalli ♂ ad. Pine Springs, 15 m.

South of the Grand Cañon of the Colorado. Nov. 15, 1884.

Nose to eye, ~~1.56~~ 1.56 in (= 40 mm.); ear, 3.00 (76); occiput,

3.30 (84); root of tail, 14.60 (371); end of outstretched

hind leg, 23.00 (584); Fore leg, 2.85 (72); Manus,

2.00 (51); Hind leg, 4.35 (110); Pes & fr. hind 4.00

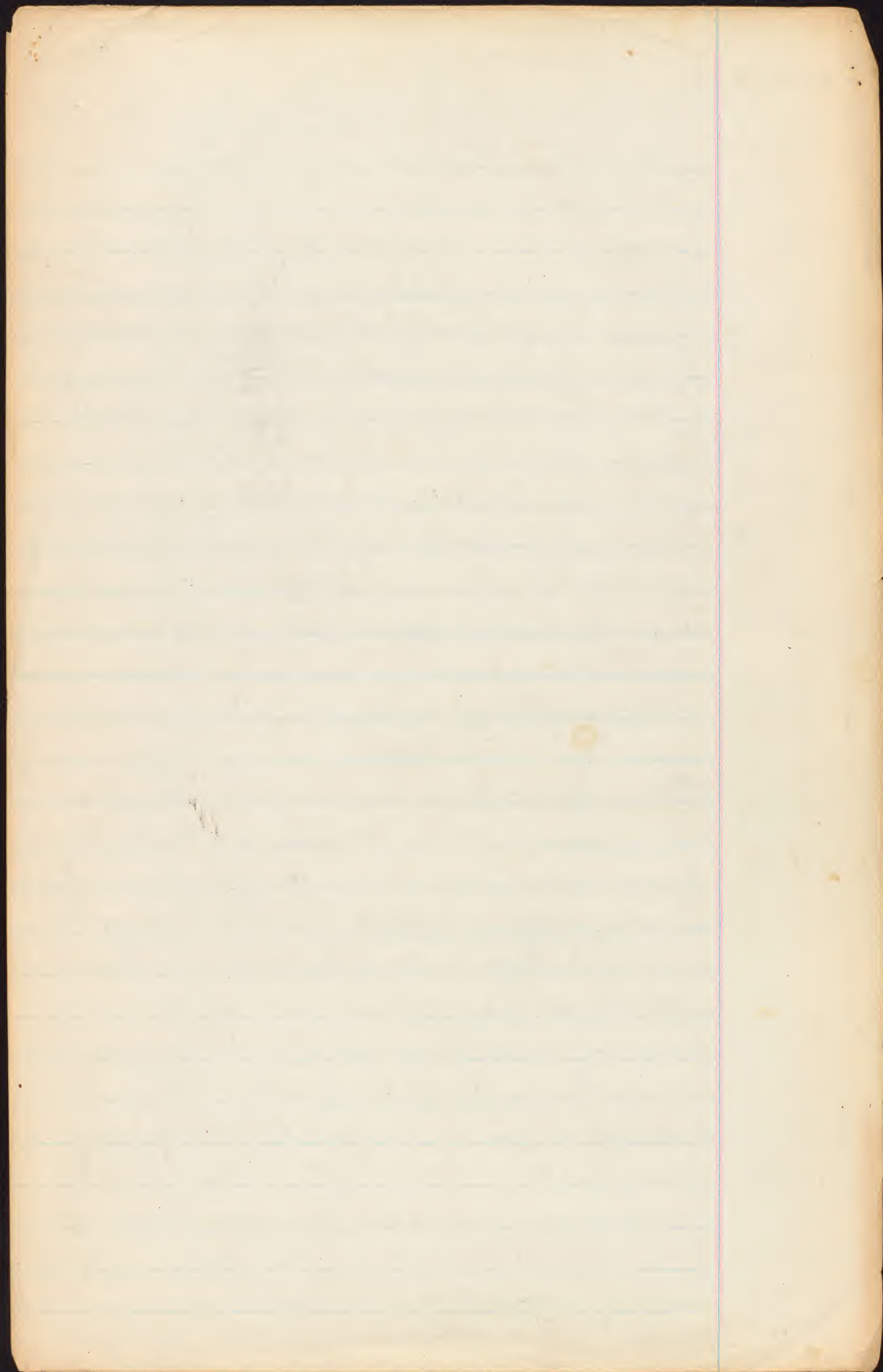
(102); Tail to end vert., 2.75 (70); hairs, 3.25 (83);

Ears, height above crown, 3.25 (83); breadth 2.00 (51);

Ears barely edged blackish. This specimen is almost

exactly like those shot at the head of the Supai Cañon

(on the top of the bluffs) as we came out.





BROWER BROTHERS.
STATIONERS & PRINTERS
293 & 295 Broadway.
NEW YORK.

(Bird) (ridge) Cotton soil.

✓ 2879. Pipilo fuscus mesoleucus ♂ ad. May 19, 1884.
Near Ash Creek, Yavapai Co., A. T.

230; 310; 97; 112; culmen, 17; gape, 18; tarsus, $2\frac{5}{10}$
middle toe and claw, 26; cl. 7. Iris, reddish-brown.
Bill, dusky above and on tip of mandible; resi-
-due bluish flesh-color. Legs, feet & claws,
brown. Was singing a loud, peculiar but agreeable ditty.

✓ 2880. Icterus parisorum, Bp. ♂ ad. May 19, 1884.
223.

Near Ash Creek, Yavapai Co., A. T.

223; 324; 108; 99; cul., 22; gape, 23; tarsus, 24;
mtc., 25; cl. 8.

✓ 2881. Lophortyx gambeli, Nutt. Gambel's
Crested Partridge. ♂ ad. Near Ash Cr. May 19, 1884

200 280; 373; 114; 104; cul., 11.5; gape, 14; tarsus, 33;
mtc., 38; cl. 10.

✓ 2882. Lophortyx gambeli, Nutt. ♂ ad. Near Ash Cr. May 19.
285; 375; 112; 102; cul., 11.2; gape, 14; tarsus, 31;
mtc., 36; cl., 9.

✓ 2883. Lophortyx gambeli, Nutt. ♀ ad. Near Ash Cr. May 19.
272; 305; 113; 95; cul., 11.5; gape, 14; tarsus, 30;
mtc., 38; cl. 9.

✓ 2884. Lophortyx gambeli, Nutt. ♀ ad. Near Ash Creek, May 19.
283; ~~38~~ 379; 117; 103; cul., 11.4; gape, 15;
tarsus, 31; mtc., 36; cl. 8.5.

May 21, 1884. Fort Verde, A. T.

✓ 2885. Icteria virens longicauda ♂ ad.

194; 256; 79; 89; cul., 14.5; gape, 18.7; nostr., 10.4
tarsus 27; mtc., 21.5; cl. 5.5. Shot by E. W. Means.

✓ 2886. Tachycineta thalassina (Sw.) Cab. ♂ ad.

136; 324; 118; 55; nostr. 5; gape, 12.5; tars., 11;
mtc., 15; cl. 5. Iris, hazel. Bill, brownish black.
Legs and feet, dark brown; claws, black.

✓ 2887. Scolecophagus cœrulea (L.) Sw. ♂ ad.

188; 298; 92; 80; cul., 17; gape, 19; tarsus, 22;
mtc., 24.5; cl. 7. Iris hazel. Bill with maxilla
blackish; mandible, bluish. Leg, feet & claws,
brownish-black.

The first Louisiana Tanagers were seen today.

Nuttall's Whippoorwill was first seen and heard at the top of Copper Canon on May 19. Lt. Vessells heard one at Whipple on the 17th. Blue Grosbeak first seen at Verde May 21. Scott's Oriole is quite numerous about the Post. Nuttall's Whippoorwill. - One seen at evening May 21.

May 22nd, 1884. Ft. Verde.

Pyrranga ludoviciana. - Abundant about the Post, frequenting low bushes, cotton wood trees occasionally, and spending much time upon the ground.

Scott's Oriole. - Several seen.

Nuttall's Poor-will. - One seen to-day under some cottonwoods near the River, whence it flew about quite well.

Petrochelidon lunifrons, Arundo horreorum, Lachrymista thalassina and Stelgidopteryx serripennis were all present.

Cyanospiza amoena. - A pair seen beside the river near the Post were the first seen at Verde.

The Black-headed Grosbeak was first seen at Verde yesterday, May 21.

307. * Pyrranga ludoviciana ♂ ad. Shot by E. W. Means with the little gun, beside our house May 22. 192; 307; 97; 76; cul. 16.2; gape, 20; tars., 20; mte., 20.5; cl. 6.

308. Pyrranga ludoviciana ♂ ad. May 22, 1884. 191; 303; 94; 76; cul., 16; gape, 20.5; tars., 21; mte., 20; cl. 6.

309. Pyrranga ludoviciana ♂ ad. May 22, 1884. 192; 309; 98; 76; cul., 16.5; gape, 21; tarsus, 20; mte., 19; cl. 6. Iris, hazel. Bill olive, dusky on point of maxilla. Legs & feet bluish-gray; claws, brown.

310. Dendroica aestiva ♀ ad. Ft. Verde, May 22. 123; 188; 57; 46; nost., 7.5; gape, 13.5; Tarsus, 18; mte., 14.5; cl. 4.

311. Dendroica auduboni ♀ ad. Ft. Verde, May 22. 143; 238; 74; 57; nost., 7; gape, 13.5; tars., 19.5; mte., 17.5; cl. 5.5. Iris, hazel. Bill, feet & claws, black.

312. Picus scalaris ♂ ad. Ft. Verde, A.T. May 22. 192; 335; 103; 65; cul. 24.5; gape, 26.5; tarsus, 18.5; mte. 22; cl. 8.5.

313. Icterus bullocki ♂ ad. Ft. Verde May 22. 204; 313; 98; 83; cul., 20; gape, 21; tarsus, 24; mte., 24; cl., 7. Iris hazel. Bill with maxilla black; mandible blue, shading into dusky at tip. Legs & feet dark bluish-gray; claws, dusky brownish.

314. Icterus bullocki ♀ ad. May 22, Verde. This & the above were a mate pair, & both shot at one shot. 210; 315; 100; 87; cul., 19.5; gape, 21; tarsus 25; mte., 24; cl. 7. Iris hazel. Bill with maxilla brownish-black; mandible blue at base shading into brownish. Legs and feet bluish gray, much lighter than in male. Claws, yellowish-brown.

315. Molothrus ater ♂ ad May 22. 182; 315; 98; 73; cul., 16; gape, 17; tarsus 24; mte., 23.5; cl., 7. Iris hazel. Bill, legs, feet & claws black.

316. Molothrus ater ♂ ad May 22. 189; 323; 101; 75; cul. 16; gape, 17; tarsus, 25; mte., 24; cl. 7. Colors as above.

317. Xanthocephalus pteroccephalus ♀ juv. May 22. 260; 422; 134; 104; cul., 22; gape, 22; tars., 36; mte., 36; claw 11. Iris, hazel. Bill, brownish black. Legs, feet & claws, black.

318. Xanthocephalus pteroccephalus ♀ juv. May 22. 275; 457; 139; 106; cul., 24; gape, 24; tarsus, 37; mte., 37; claw 11. Sex & juv. carefully determined.

319. Little Vireo (Vireo pusillus L.) ♂ ad. May 23. 131; 185; 56; 54; nost., 6.5; gape, 14; tarsus 20; mte. 14; claw, 5. Iris, hazel. Bill with maxilla brownish-black; mandible fleshy-brown. Legs and feet dark bluish-gray. Was singing a pretty song when shot.

May 23, 1884. Ft Verde, A. T.

- ✓ 2901. 320. *Porospiza bilineata* ♀ ad May 22. 132; 210; 64; 63; cul., 10.6; gape, 12; tarsus, 19; mtc., 17; cl. 5.
- ✓ 2902. 321. *Linumulus sparverius* ♂ ad. 260; 572; 183; 130; culmen including cere, 15.5; cere, 4.6; culmen, 12.5; gape, 18; tars., 35; mtc., 32; cl., 10. Iris hazel, eyelids + cere orange yellow, legs and feet lemon yellow, claws bluish black - bill bluish shading into blue-black at tip. Plumage unusually pale.
322. *Tyrannus verticalis* ♂ ad. 2903. 220; 400; 127; 95; noot. 14.5; gape 25.5; tars., 19; mtc., 20; cl., 7. Shot by E. M. M.
- ✓ 2904. 323. *Icteria virens* ♂ ad. 200; 260; 82; 92; cul., 15.5; noot., 11; gape, 19; tars., 27; mtc., 22.5; cl., 6.5.
324. *Icterus cucullatus* ♂ ad. ✓ 2905. 217; 280; 90; 100; Cul., 20.5; gape 21; tars. 23; mtc., 22; cl., 6.3
325. *Icterus cucullatus* ♀ ad. ✓ 2906. 197; 259; 78; 89; Cul., 17; gape 19.5; tars., 22; mtc., 21.5; cl., 6. This and the above were a mated pair. Had an egg nearly ready for extrusion.
326. *Pyrauga ludoviciana* ♂ ad. ✓ 2907. 190; 305; 96; 76; Cul., 16; gape 19.3; tars. 21; mtc., 20.5; cl., 6.5.
327. *Icterus bullocki* ♂ ad. ✓ 2908. 209; 317; 100; 85; Cul., 20; gape 21; tars., 24; mtc., 23; cl., 6.5.
328. *Icterus bullocki* ♂ ad. ✓ 2909. 210; 320; 102; 86; Cul., 21; gape 22; tars., 24.5; mtc., 24; cl., 7.
329. *Icterus bullocki* ♂ ad. ✓ 2910. 205; 318; 100; 85; Cul., 19; gape 21; tars., 24; mtc., 23; cl., 7.
330. *Icterus bullocki* ♂ ad. ✓ 2911. 205; 316; 100.5; 87; Cul., 20; gape 20.5; tars., 24; mtc., 24; cl., 7.

331. *Icterus cucullatus* ♂ ad. 21.5; 216; 289; 99; 102; Cul., 18.5; gape 22; tars., 23; mtc., 22; cl., 7.

Notes :-

Turdus migratorius propinquus. - Last seen at Verde on May 5th. It was very abundant when we arrived at Verde late in March, but its numbers rapidly decreased during the last week in April.

Oreoscoptes montanus. - Has not been seen at Verde since April 18th. On the 19th I saw a number between Ash Creek and Whipple, and heard its singular and surprising musical performance.

Mimus polyglottus. - This species is very common about Verde. Yesterday Sunday (May 23, 1884) I found two nests, each containing five eggs, near the post. They will be found described in my book of notes on Nests & Eggs.

Geothlypis trichas. - This interesting species is now fairly numerous along the Verde River. It must breed very early, for I took two young birds of the year that flew well and appeared to be taking care of themselves on May April 29th.

Sialia mexicana. - A few were seen at Whipple on May 9th, since which date I have not noted any.

Specimens not Ornithological Collected

In Arizona:-

1. Jack Rabbit (*Lepus callosus texianus*). ♀ ad. (Skull). Ft. Verde, Arizona. April 1st, 1884.
2. Jack Rabbit (*Lepus callosus texianus*). ♀ ad. (Skull). Ft. Verde, Arizona. April 1st, 1884.
3. Horned Lizard (*Phrynosoma douglassii*) ad. (Alcohol) March 25, 1884. Found in the road between Hudson's Rancho on Ash Creek and Post Verde. (over)

4. Rock Squirrel (Spermophilus grammurus) ¹♂ ad.
(No. 91) March 22, 1884. Prescott, Arizona. Skin.
- * 5. "Cotton-tail" Rabbit (Lepus ^{arizonae} ~~siglatus~~) major ¹♂ ad.
(No. 92) April 8, 1884, Fort Verde, Arizona (* Shot by Mrs. Ella W. Mearns). Nose to eye, 35; ear, 61; occiput, 68; root of tail, 350; end of outstretched hind leg, 540. Ears, height of, 87; width, 51. Hind-foot, 86; leg, 95. Fore-foot, 41; fore-arm, 56. Skin.
- * 6. Ground Squirrel (Tamias harrisi (Aud. and Bach.) Allen) ¹♂ ad.
(No. 93) April 8, 1884. Fort Verde, Arizona (* Shot by Mrs. Ella W. Mearns). Nose to eye, 17.4; ear, 36; occiput, 43; root of tail, 172; end of outstretched hind-leg, 255; tip of hairs of tail, 277. Fore-arm, 246. Fore-foot, 23.5; its longest claw, 8. Leg, 39; hind-foot, 36.4. Tail, from root to end of hairs, 112; vertebrae, 86. Skin.

7. Ground Squirrel (Tamias harrisi (Aud. and Bach.) Allen) ¹♂ ad.
(No. 94) April 15, 1884. Fort Verde, Arizona. Nose to eye, 17.5; ear, 35; occiput, 42; root of tail, 155; end of outstretched hind-leg, 236; tip of hairs of tail, 259; Tail, from root to end of hairs, 104; vertebrae, 80; Distance between claws of outstretched fore-feet, 16.2. Forearm, 25; Forefoot, 22; Its longest claw, 6.5. Hind-leg, 33; Hind-foot, 35; Its longest claw, 7.

- (No. 95) 8. Tamias asiaticus, var. dorsalis. Lila Chipmunk.
♂ ad. April 21, 1884. Whipple Barracks, Arizona.
Nose to eye, 17; ear, 32; occiput, 41; root of tail, 145; end of tail (hairs), 272. Tail, from root to end of vertebrae, 95; hairs, 127; forefoot, 18.3; its longest claw, 4. Hind-foot, 31; its longest claw, 5. Distance between outstretched fore claws, 14.5. Fore-arm, 23. Leg, 39.5.

- (No. 97) 9. Little Bat Myotis yumanensis (H. Allen) ¹♂ ad.
Shot beside the Verde River at Fort Verde, Arizona May 6, 1884.

10. Skin of a large Rattlesnake (Crotalus)
(Killed at Fort Verde, Arizona
June 24th, 1884.

11. Rattles of a Rattlesnake (Crotalus)
Killed in Peach Springs Canon, May 15, 1884, coming up from the Grand Canon of the Colorado, Arizona. I killed two large Rattlesnakes, but lost the other set of rattles.

List of Birds Collected In Arizona

1. Murela migratoria propinqua, Ridgw. Western Robin.

2. Oreoscoptes montanus (Towns.) Baird. Sage Thrasher.
♂♂ ad. ad.

3. ^{Young.} Mimus polyglottus (Linn.) Boie. Mockingbird.
♂♂ ad. ad. Nos. 2915, 2953.

4. ^{Nests and eggs:} Carpodacus crissalis, Henry. Red-vented Thrasher.
♂♂ ad. ad. Nos. 2799, 2831, 3018.

5. ^{Nests and eggs:} Sialia mexicana, Swain. Californian Bluebird.
♂♂ ad. ad. (2660), 2706.*

6. ^{Young:} Sialia arctica, Swain. Rocky Mountain Bluebird.
♂♂ ad. ad. 2704*, 2705*.

7. ^{Young:} Phainopepla nitens (Sw.) Sel. Black-crested Flycatcher.
3041, 3043, 3044, 3052, 3058, 3069. ♂♂ ad. ad. 2974, 2995, 2996, 3017.
^{Young:} ♂♂: 2869, 3068, 3108, ♀♀: 3045.

9.

10.

11. Lophophanes inornatus (Lamb.) Cass. Plain Titmouse.
♂♂ ad. ad. (2648)(

12.

Territory by Edgar A. Mearns

No. 2688 ♂ ad.

♂♂ ad. ad. Nos. 2681, 2720*, 2722*, 2723*, 2724*, 2763.

♂♂ ad. ad. Nos. 2797*, 2810, 2990*.

^{Young:} ♂♂ ad. ad. Nos. 2712, 2719*, 2830, 2969.

^{Young:} ♂♂: 3025, 2800,

^{Young:} ♀♀: 2955, 3026, 3072.

♂♂ ad. ad. Nos. (2656), 2777, 2807.

♂♂ ad. ad. Nos. 2694*.

♂♂ ad. ad. Nos. 2861, 2941, 2961, 2975, 2976, 2977, 2980, 2997, 2998, 3001, 3002, 3011, 3035, 3039, 3019, 3036, 3040, 3042, 3053, 3057, 3107.

Nests & Eggs:

Nestlings: 3046, 3047.

♂♂ ad. ad. Nos. (2647)

13 Psaltirius14. Auriparus flaviceps (Sunder.) Baird. Yellow-headed Tit.
♀♀ ad. ad. 2868, 2973,Young ♂ 3032
15. Sitta carolinensis aculeata (Less.) Allen. Slender-billed Nuthatch.
ser. undetermined - (2672) ♀♀ ad. ad.Young ♂: 3032
16. Sitta pygmaea, Vig. Pigmy Nuthatch.

17.

18.

19

20. Salpinctes obsoletus (Say) Leaban. Rock Wren.21. Catherpes mexicanus conspersus, Ridgw. White-throated Wren.
♀♀ ad. ad. (2678)

22.

23.

24.

25.

♂♂ ad. ad. 2867,

♂♂ ad. ad. (2671) (~~2657~~), ~~2764~~, ~~2765~~.

♂♂ ad. ad. (2657) (2764) (2765)

♂♂ ad. ad. 2747, 2769, 2778,

♂♂ ad. ad.

26. *Helminthophaga luciae*, Cooper. Lucy's Warbler.
 ♀♀ ad. ad. 3033.

Young ♂.

♀♀ juv. 3000, 3010, 3111.

27. *Helminthophaga virginiae*, Baird. Virginia's Warbler.

28. *Helminthophaga celata lutescens*, Ridgw. Lutescent Warbler.
 ♀♀ ad. ad. 2922.

29. *Dendroica aestiva* (Linn.) Baird. Summer Yellow Bird.
 ♀♀ ad. ad. 2815, 2826, 2891, 3063.

30. *Dendroica audubonii* (Linn.) Baird. Audubon's Warbler.
 ♀♀ ad. ad. 2892.

31. *Dendroica nigrescens* (Linn.) Baird. Black-throated Gray Warbler.
 ♀♀ ad. ad.

32.

33

34.

35. *Geothlypis macgillivrayi* (Aud.) Baird. Macgillivray's Warbler.

36. *Geothlypis trichas* (Linn.) Caban. Maryland Yellow-throat.

37. *Icteria virens longicauda* (Linn.)

♀ ad. ad. 2920, 2943.

Young ♂. 3054, 3109.

38. *Wilsonia pusilla pilolata* (Pall.) Ridgw. Pileolated Warbler.
 ♀♀ ad. ad. 2923.

♂♂ ad. ad. 2691, 2992, 3066, 3067, 3113.

♂♂ ad. ad. 2874,

♂♂ ad. ad.

♂♂ ad. ad. 2740, 2768, 2927,

♂♂ ad. ad. 2847,

♂♂ ad. ad. 2841.

♂♂ ad. ad. 2921, 2924.

♂♂ ad. ad. 2842,

♂♂ ad. ad. 2845, 2846, 2853, 2871, 2885, 2904, 2986, 2987, 3013, 3070.

♂♂ ad. ad.

Birds Sent to Prof. Louis A. Zerega,
No. 111 E. 7th St., N. Y. City, Dec. 12th, 1884.

- ✓ *Lophortyx gambeli*. No. 2786 ♂ ad; 2787 ♀ ad.
- ✓ *Cyanocitta stelleri macrolopha*. No. 2668 ♂ ad; 2669 ♀ ad.
- ✓ *Pyrranga ludoviciana*. No. 2948* ♂ ad.
- ✓ *Melanerpes formicivorus*. No. 2662 ♂ ad; 2661 ♀ ad.
- ✓ *Capodacus frontalis*. No. 2658 ♂ ad.
- ✓ *Aphelocoma woodhousei*. No. 2670 ♀ ad.
- ✓ *Tinnunculus sparverius*. No. 2666 ♀ ad.
- ✓ *Lanius ludovicianus excubitorides* ♂ ad;
- ✓ *Chondestes grammacus*. No. 2801 ♂ ad.
- ✓ *Pipilo aberti*. No. 2734 ♂ ad.
- ✓ *Guiraca caerulea*. No. 3029 ♂ ad.
- ✓ *Amphispiza bilineata*. No. 2878. ♂ ad.

May 24, 1884. Ft. Verde, A.T.

332. *Melanerpes formicivorus barrowi*. ♂ ad.
✓ 2913. 245; 449; 113.7; 87; culmen, 28; gape, 31; tarsus, 22.5; mte., 26.5; Cl., 9. Iris, white. Bill, blue-black. Legs and feet, greenish-gray; claws, dark. This is the only specimen I have thus far seen in the Verde Valley or any where except at Whipple. It was found in an old cotton-wood hedge, most of the trees being small and dead.

333. *Contopus virens richardsoni* ♂ ad.
2914. 158; 265; 89; 68; nost., 9.5; gape, 18.5; tarsus, 13.3; mte., 13; claw, 5. Iris, hazel. Bill, with maxilla, black; mandible, yellow at base, shading into brownish-black at tip. Legs, feet & claws, black. The first & only one seen thus far.

334. *Mimus polyglottus*. ♀ ad. This bird is
2915. the parent of set $\frac{9}{5}$ nest and eggs described in my book on Nests & Eggs, p.
264; 352; 106; 116; nost., 13; gape, 25; tarsus, 32; mte., 29; claw, 8. Iris brownish-yellow. Bill, legs, feet and claws, black.

335. *Pyrranga ludoviciana*. ♂ ad.
✓ 2916. 188; 300; 94; 74; Cul., 15; gape 18; tars., 21.5; Mte., 20.5; Cl., 6.

336. *Pyrranga ludoviciana*. ♂ ad.
✓ 2917. 185; 295; 92; 73; Cul., 16; gape 19; tars., 20.5; Mte., 20; claw 6.

337. *Pyrranga ludoviciana*. ♂ ad.
✓ 2918. 191; 305; 97; 77; Cul., 16.5; gape 18; tars., 22; Mte., 20.5; claw 6.

338. *Pyrranga ludoviciana*. ♂ ad.
✓ 2919. 184; 297; 94; 74; Cul., 17; gape 19.5; tars., 20; Mte., 20; claw 6.5.

Amphispiza bilineata. - Found nest with 5 eggs in a small bush 1 foot from the ground. Eggs pure white or bluish.

339. Young Cotton-tail Rabbit ♂ juv. Ft. Verde.
No. 102. May 26, 1884. Total length to root of tail, 190. tail, 45. Total length. 235 *Lepus arizonae major*.

May 26th, 1884. Ft. Verde, A. T.

- ✓ 340. *Icteria virens longicauda* ♀ ad.
 ✓ 2920. 193; 257; 81; 85; Culmen 15; gape 20.5; tars. 27; mte. 23; claw 6; rostril. 11.
341. *Geothlypis macgillivrayi* ♂ ad. First seen.
 ✓ 2921. 138; 198; 62; 57; ~~88~~ Nostr., 7.3; gape 14; tars., 21; mte., 18; claw 5.
342. *Helminthophaga celata* ♀ ad. First seen.
 ✓ 2922. 128; 196; 61; 53; Nostr., 8; gape 13; tars. 19; mte., 16; claw 4.4.
343. *Myiodytes pusillus pileolatus* ♀ ad. First seen.
 ✓ 2923. 124; 173; 53; 54; Nostr., 7; gape 13; tars., 18; mte., 13.5; claw 4.
344. *Geothlypis macgillivrayi* ♂ ad.
 ✓ 2924. 140; 202; 62; 57; Nostr., 8.3; gape, 14; tarsus, 22; mte., 18; claw, 5. Iris, hazel. Bill, with maxilla dark brown; mandible, yellow at base, becoming pale brown towards tip. Legs, feet and claws pale yellowish-brown.
345. *Pyrranga ludoviciana* ♂ ad.
 ✓ 2925. 192; 302; 95; 73.5; 72; Culmen, 16; gape, 20; tarsus, 21; mte., 20; claw, 6.3. Iris hazel. Bill, olive-brown above, yellowish below. Legs and feet dusky brownish-gray; claws, brown.
346. *Pyrranga ludoviciana* ♀ ad.
 ✓ 2926. 192; 298; 93; 75; Culmen, 16.5; gape, 20; tarsus, 21; mte., 20; claw 6.3. The bill is darker and more uniform olive than the above ♂. Legs, feet & claws like the male, only a trifle darker in shade.
- Notes. - Found one nest of the *Vireo pusillus*, common, containing one egg. Another found to-day (both May 26) contained four eggs.

May 27th, 1884. Ft. Verde, A. T.

- Dendroica aestiva*. - A completed nest blew down from a cotton wood in our yard to-day, a pretty soft structure largely composed of feathers and cotton wood down mixed with a little horse hair and a few stems of plants. This species is extremely common, and its song a quite loud and pretty warble.
- Geothlypis macgillivrayi*. - Quite numerous all the way from here to Blackfords where bushes grow and a few noted in bushes about the post. It was first seen yesterday when quite a number were seen & two specimens taken.
- Myiodytes pusillus pileolatus*. - Several seen to-day.
- Pyrranga ludoviciana*. - Extremely abundant in the low mesquite bushes which are here called "cat's claws". Both sexes are now abundant. A day or two ago females were scarce while males were common.
- Petrochelidon lunifrons*. - Still abundant.
- Hirundo erythrogastra horreorum*. - Two were seen this evening.
- Stelgidopteryx serripennis*. - Several noted.
- Phainopepla nitens*. - An old male seen four miles up the river, and another male seen near the post. A flock seen May 23rd across the River, and one seen near Blackford's on the 24th.
- Lanius ludovicianus excubitorides*. - Scarce. Saw one May 24th, and no others lately.
- Zonotrichia leucophrys*. - Several seen to-day.
- Pipilo chlorurus*. - One or two seen. Not numerous here as yet.
- Leontopus virens richardsoni*. - Several seen to-day, but not numerous.
- Ceryle alcyon*. - One seen by Linton Carrington & Volger on Oak Creek May 25, thirty miles up river.

(May 27th - continued)

Ardia herodias. - One or two seen.*Agelaius vociferus*. - Still numerous upon the sand-flats along the Verde. Also comes about the post and on higher ground when the ground is wet after rains.347. *Dendroica aestiva* ♂ ad.

✓ 2927. 129; 195; 61; 47; nost., 8; gape, 15; tarsus, 19; mte., 15; cl. 5.

348. *Pipilo chloropus* ♀ ad.

✓ 2928. 183; 241; 73; 82; cul., 13.5; gape, 14; tarsus, 25; mte., 24; claw, 7.5.

349. *Chondestes grammacus* ♂ ad.

✓ 2929. 175; 282; 86; 70; cul. 14.5; gape, 15; tarsus, 21; mte., 21.5; cl. 6.5.

350. *Chondestes grammacus* ♀ ad.

✓ 2930. 171; 280; 84; 73; culmen, 13; gape, 14; tarsus, 20.5; mte. 21; cl., 6. This the above were associated pair and were evidently about to breed.

351. *Pyrranga ludoviciana* ♂ ad.

✓ 2931. 193; 312; 98; 81; cul., 15.5; gape 20; tars. 20.3; mte. 20; cl. 6.

~~352~~ *Pyrranga ludoviciana* ♂ ad.

194; 311; 97; 77; cul., 16; gape 20; tars. 21; mte. 21; cl. 7. Not skinned.

353. *Pyrranga ludoviciana* ♂ ad.

✓ 2932. 195; 314; 97; 77; cul., 16; gape 20; tars. 21; mte. 20.5; cl. 6.

354. *Pyrranga ludoviciana* ♂ ad.

✓ 2933. 193; 305; 96.5; 77; cul., 16; gape 19; tars. 20.6; mte., 20; cl. 6.

355. *Pyrranga ludoviciana* ♂ ad.

✓ 2934. 190; 298; 91; 74; cul., 16.4; gape 18; tars., 21; mte., 20; cl. 6.

356. *Pyrranga ludoviciana* ♂ ad.

✓ 2935. 184; 289; 89; 71; cul., 15.5; gape 19; tars., 21; mte., 20.5; cl. 6.5.

357. *Pyrranga ludoviciana* ♀ ad.

✓ 2936. 189; 293; 89; 74; cul., 15.6; gape 19.5; tars. 20.5; mte., 20; cl. 6.2.

358. *Pyrranga ludoviciana* ♀ ad.

✓ 2937. 191; 300; 93; 75; cul., 15.6; gape 20; tars., 21; mte., 20.5; cl. 6.

May 28th, 1884. Ft Verde, A. T.

359. *Empidonax flaviventris* ♀ ad.

✓ 2938. 147; 219; 66; 61; nost., 8; gape, 17; tarsus, 17.5; mte., 14.5; cl., 5. Iris hazel. Bill with maxilla uniform brownish-black, and mandible entirely yellow. Legs, dark brown feet & claws, brownish-black. Was apparently the author of a loud sweet song.

360. Little Vireo (*Vireo pusillus*). ♀ ad

✓ 2939. 129; 183; 55; 52; nost., 7; gape, 15; tars., 19.5; mte., 14; cl., 4.5. Iris, brown. Bill, with maxilla dark brown, whitish along edge; mandible flesh-color marked with grayish. Legs & feet bluish-gray; claws, brown.

361. *Chrysomitris psaltria* ♂ ad.

✓ 2940. 118; 205; 65; 45; culmen, 10; gape, 10; tarsus, 13; mte. 15; cl., 5.5. Iris hazel. Bill, with maxilla brownish-blue at base becoming blackish towards point; mandible, bluish, tipped dusky. Legs, feet and claws, brown.

362. *Phainopepla nitens* ♂ ad.

✓ 2941. 304; 300; 95; 102; culmen, 12; nostril, 7.5; gape, 16; tarsus, 17; mte., 17; cl. 5. Irides, bright red. Bill, legs, feet and claws all uniform flesh, which shows a decided tinge of brown when held in a strong light.

363. *Icterus bullocki*. ♂ ad.

✓ 2942. 205; 320; 106; 80; cul., 18.5; gape, 20; tarsus, 25; mte., 24; cl. 7.

364. *Icteria virens longicauda*. ad.

✓ 2943. 191; 250; 77; 85; cul., 15.2; nost., 10.5; gape, 19; tarsus, 27.5; mte., 21; claw, 6.5.

365. *Pyrranga ludoviciana* ♂ ad.

✓ 2944. 190; 304; 98; 75; cul., 16; gape, 21; tars. 21; mte., 20; cl. 6.5.

2937a. Not skinned.

366. *Tyrnunculus sparverius*. Ad.
 2944. 270; 5-67; 180; 133; Cul. including cere, 16; cere, 5.4; culmen, 11.2; gape, 17; tarsus, 36; mte., 32.5; cl. 10.5. Iris, hazel. Cere, skin about base of bill, eyelids, legs and feet yellow. Bill blue at bases of both mandibles, fading into blue-black at tip. Claws, black.

367. *Buteo ~~abbreviatus~~ abbreviatus* ad. Zone-tailed Hawk
 2945. 498; 1245; 400; 230; culmen including cere, 33; cere, 15; culmen, 22; gape, 36; tarsus, 66; mte., 60; claw, 22. Iris, hazel. Cere and skin along gape, tarsi and toes, greenish yellow. Bill pale blue at base shading into blue-black. Claws, black. Stomach contained remains of fishes and lizards.

368. *Mergus ^{mexicanus} serrator* ad.
 2946. 585; 885; 255; 104; cul. from frontal feathers 49; from base of bill 3-6; nostril 32; gape, 65; tarsus, 47; mte. 66; cl. 8.5.

Notes. - (May 28th.) *Chrysomitris palmarum*. - When flying the black and white color pattern on the under side of the wings, seen when the bird is flying overhead is very striking and distinctive. Its call-note is a loud wailing cry much more sad in character and low than that of tristis itself. Its song is exceedingly sweet as well as sad, and is quite loud and long. The call-note is between that of the Killdeer and Wood Pewee. This is only the second time I have seen this bird since I have been in Arizona. There were several pairs amongst the large cottonwoods about three miles up the River.

Pyranga rubra cooperi? A large red Tanager and its plainly-clad mate were seen in a low bush, whence they flew to the cottonwoods up the Verde, & could not be found.
Melospelia leucoptera. - A single Dove with broad white wing bands flew from a short distance ahead of me, out of sight down the Verde River.

Phainopepla nitens. - Two pairs were seen besides the specimen shot, which latter was killed near my quarters on returning. This is the shyest of all small birds. Neither of the pairs seen could be approached.

Pandion haliaetus carolinensis. - One was seen feeding in the Verde.

Buteo abbreviatus. - Another Black Buzzard doubtless the mate of the one ~~above~~ captured, was seen feeding upon a dead Sucker (*Catostomus* - ?) about 15 inches in length which I afterwards picked up from the spot - the sand beside the Verde. The stomach of the specimen shot was empty.

Icterus cucullatus. - Has not been seen since May 23, when I procured several specimens. To-day I found an Oriole's nest in the cotton wood tree in which I killed a pair of Hooded Orioles on the 23rd. It was deserted and contained three eggs which, although unbroken, were smeared with other eggs which had evidently been removed and broken by some animal. The nest was attached to a large bunch of mistletoe. I packed cotton upon the eggs and stood the nest upon the ground in a protected shady spot beside a stump, fearing that I should break it if I carried it along with me. On my return a few hours later a small round hole was discovered beside the cotton and the eggs were all missing.

Icterus bullocki. - Several nests were found attached to the cottonwood boughs and one into which I looked contained four fresh eggs.

Leiraea coralina. At Verde, the first one seen was shot on May 21. Another male was seen on May 22, and since then none have been observed.

May 29th. Fort Verde, A.T.

To-day was spent in skinning the birds shot yesterday. A four-thirty drove in the buckboard with Ella & Lillian four miles up the River to see a patient. We saw numberless Louisiana Tanagers and one male Blue Grosbeak.

Dendroica coronata. - A single female was seen on May 27th. The species has departed.

Ardea herodias. - One was seen yesterday.

Mimus polyglottus. - A nest seen yesterday was built in a low bush, was very similar to the one collected, and contained 3 young and two eggs about to hatch.

Carpodacus frontalis. - One nest found ^{yesterday} contained four eggs about to hatch. The nests are built in tufts of bushy branchlets growing out from the banks of large cotton woods, and are very coarse roughly-built nests.

Quaedura carolina. - One nest found yesterday contained two ~~eggs~~ ^{eggs} which were just ready to hatch. One measured 27.5 X 21.

Pipilo aberti. - Took the first nest and sent of four eggs from a cottonwood tree of very small size near the post. It was found May 22nd and then contained 2 eggs. To-day I shot the female as she flew from the nest. About the nest this species utters a wheezy note just like the Robin's low autumn note.

269. 223; 280; 86; 113; cul., 16.5; gape, 17; tarsus 28; mte., 27; cl. 9. Iris, brown. Bill with maxilla olivaceous brown, lighter on edges; mandible ^{light} bluish fleshy brown. Legs, feet and claws, purplish-brown. Pipilo aberti. ♂ ad.

Note. - On May 26th, I found a nest of the Little Vireo containing four eggs. I was unable to procure the parents, so left the nest until the 27th, when I found two of the eggs gone, another with a small round

hole in the side through which the contents had been extracted. The remaining egg contained a completely developed ~~egg~~ chick, and hence could not be preserved; but the nest contained a perfectly fresh egg of Nolothrus ater ^{obscurus} which I preserved with the broken egg, which measures 18 X 14, is pure white, minutely dotted with very dark brown around the larger end, with occasional specks scattered over the rest of it. The Vireo's egg which contained the chick was like the one above described, but measured 17 X 13.2. The Cowbird's egg measures

May 30th, 1884. Ft. Verde, A.T.

Ella shot four male Louisiana Tanagers:

✓ 2948 370. * Pyrranga ludoviciana. ♂ ad. 182 X 304. E. W. M.
2949. 371. * Pyrranga ludoviciana. ♂ ad. 190 X 310. E. W. M.
2950 372. * Pyrranga ludoviciana ♂ ad. (head orange-yellow tinged with red). 182; 302; 92; 74; culmen, 17.5; gape, 21; tarsus, 21.5; mte., 20; cl. 6.

373 Euphonia pusillus (Swains.). ♂ ad.
2951 150; 227; 69; 63; nost., 8.5; gape, 17.5; tarsus, 17; mte., 15; cl. 6. Iris, hazel. Maxilla, brownish-black; mandible pale yellowish-brown. Legs, feet and claws, brownish-black.

374 Podiceps bilineata ♂ ad.
✓ 2952, 142; 220; 67; 64; cul., 13; gape, 13; tarsus, 19; mte., 17.5; cl. 5.

375 Mimus polyglottus ♂ ad. Shot from nest + 5 eggs.
2953. 260; 355; 107; 119; nost., 13; gape, 26; tarsus, 34; mte., 29; cl. 7.5. Iris, yellowish-brown. Bill, brownish-black. Legs feet + claws very dark (blackish) brown.

✓ 376 Spizella breweri. ♂ ad. Shot from nest.
2954. 145; 197; 59; 65; cul., 9; gape, 9.5; tarsus 17.5; mte., 16.5; cl., 5. Iris, hazel. Bill with maxilla brown and mandible flesh-color, both mandibles shading into black at tip. Tarsus, light brown; claws dark brown.

377. *Harporhynchus cyssalis* ♀ juvenis. Young of year.
 2958. 300X 1325. Iris brownish-yellow.
 Bill, black. Legs, feet and claws, dark bluish-gray.

378. *Guiraca cornulea*. ♂ ad.
 2956. 188; 295; 91; 77; cul., 18; gape, 18; tarsus, 20;
 mte., 24; el., 7.5. Iris hazel. Bill with
 maxilla blackish; mandible pale bluish.
 Legs, feet & claws, very dark brown.

2957. 379. *Pyrranga ludoviciana*. ♂ ad. 193X 300.

2958. 380. *Pyrranga ludoviciana* ♀ juvenis.
 189; 300; 94; 75; culmen, 16; gape, 19;
 tarsus 19.5; mte., 19; el., 6.

2959. 381. *Zonotrichia leucophrys*. ♂ ad.
 176; 251; 76; 79; culmen, 11; gape 13;
 tarsus, 22; mte., 22; el., 7.

Notes. - Found a nest of the Ladder-backed
 Woodpecker (*Picus scalaris*) in a stump of a
 cottonwood. The tree branched near the base
 and in ^{the stump of} one of the dead branches, about three
 feet from the ground the entrance of the Woodpecker's
 nest was discovered by the flight from it of the
 parent. On tapping on the stump the young
 birds were heard uttering their cry for food,
 which resembled the cry of other young Woodpeckers
Carpodacus frontalis. - Found a nest in
 a low branch of a cottonwood which contained
 four large young, nearly able to fly. The
 nest was built of large sticks and other
 coarse materials and was bulky and
 loosely constructed.

May 13th, 1884. Ft. Verde, A. T.

2960. 382. *Cluco flammeus bratincola* (Sp.) Coues. ad.
 365; 1165; 330; 144; Culmen & cere (measured
 from frontal feathers, 33; cere, 15; culmen, 22;
 gape, 44; tarsus, 78; mte., 55; el. 2).
 Iris indistinguishable from black. Cere & bare
 skin about head pinkish-white. Bill waxy white,
 exhibiting a little dusky shading just at base of
 maxilla & r. The scutellae of tarsus and feet, dark

or dusky brown, small in size, with broad whitish
 areas between. Claws, olive-brown. This bird was
 roosting in the thick branches of the cottonwoods
 which border the Verde, and was started from
 the tree by a shot fired at a Hummingbird
 beneath the trees. I shot it on the wing as
 it left the tree and brought it down winged. It
 ran or hopped rapidly away. I pursued and
 with some difficulty captured it. When caught
 it uttered ~~loud~~ loud cries which could be
 heard for miles, and were not unlike the
 cries a pig utters when being caught. I held
 it by its outstretched wings and it tried to
 claw me, and as it resisted my attempts
 to win its wings above its back so that I
 could hold it in one hand, I tried to seize
 its feet when it caught and clawed me
 so severely that I dispatched it immediately,
 instead of trying to take it home alive as I
 at first had intended to do. ^{Stomach contained mice,}
Ardea herodias. - An adult Great Blue Heron
 was seen on the Verde. The species is doubtless
 breeding near the Post, probably in the cotton-
 woods along the Verde River. ^{May 28th,}
Pyrranga festiva cooperi. - I saw a pair of
 bright colored Tanagers, the male bright red
 all over, sitting on some low bushes near
 the Verde a couple of miles above the Post.
 At my approach the male bird flew into the
 cottonwoods along the river and could
 not be found. The female was also too shy
 to be approached.

June 3rd, 1884. Ft. Verde, A. T.

Phainopepla nitens. - I saw a fine male
 upon a dry bush, a little higher than the
 surrounding bushes. It was too shy to
 permit a near approach, but flew to a
 bush at a great distance and as I
 again approached, it took itself to a high

cottonwood-tree and perched upon the topmost dry branch, only to fly away to a dist tree when I essayed to approach it by a circuitous route. Thus it baffled me many times, until it finally reached the last cottonwood tree in the long row. As I approached this tree it eyed me closely, hopped about upon the branch on which it sat, erected its crest to the fullest extent. Three times it seemed bent upon flying across the Verde, but alighted upon another branch. It then flew strongly away over the River, then suddenly turned and flew straight back past the tree and myself at a considerable height, then dropped suddenly straight down and disappeared amongst the low shrubbery.

I followed, and had nearly gotten near enough for a shot, when it again flew, but this time straight up in the air for at least a distance of fifty feet, and snapping an insect dropped down upon the same low bush, and there remained until I secured it by a long shot. It took me some time to discover it as it had concealed itself by crawling beneath the dead twigs and rubbish under the bush upon which it had sat.

Icterus bullocki.— The nest which contained four eggs on May 28th, contained a young chick, and three eggs about to hatch, when I visited it today.

Myiarchus cinerascens. A nest was found in a cottonwood stump, a branch of a low ^{multiple} fork of a cottonwood at a height of about four feet. The nest site was the deserted burrow of a Woodpecker, doubtless Picus scalaris, was about six inches below the entrance hole and contained four young only a day or two old. The nest was thick and composed entirely of hair of various quadrupeds, principally that of rabbits.

Harporthynchus crissalis.— A nest was found in a thick bush. It contained three bluish-green, unspotted eggs. The male bird revealed the situation of the nest by flying from the bush or one near it, and the female was discovered sitting upon her eggs. Thinking that more eggs might be deposited the nest and birds were left undisturbed.

Pipilo aberti.— A nest was found near the above described one of the Crissal Thrasher, and as it, too, contained but three eggs, it was left also.

Zenaidura carolina.— Three nests were found. These birds occasionally occupy a nest in common, two pairs. Two of the nests found contained two eggs each; one suite was perfectly fresh, while the other was considerably advanced in incubation. The third nest was seen to contain eggs. So the female was shot as she sat on a low branch where she alighted when driven from her nest. Not wishing to carry the eggs about as I intended returning that way, I left the nest intact, and on my return, to my surprise found another bird sitting on the eggs. Two other birds, probably males, were seen in an adjoining tree. I fired at the second bird as she flew from the nest, but unfortunately missed her and could not obtain a second shot. The nest contained three eggs, all of which were perfectly fresh. The nest had doubtless belonged to two pairs of Doves, and without doubt would have contained a fourth egg if left undisturbed another. So far as I know this is the first instance in which two pairs of Doves have bred in one nest.

383. Phainopepla nitens. ♂ ad.
216; 302; 95; 109; cul, 13; nost, 8; gape, 18; tarsus 18; mte., 18.7; cl., 5. Iris, red. Bill, legs & feet, black, showing a shade of brown in strong light.

384. *Myiarchus cinerascens* ♂ ad. 1
 2962. 212; 313; 95; 96; nost., 14; gape, 25; tarsus, 23;
 mte., 18.5; cl., 6.5. Iris, hazel. Bill uniform black
 with a brownish tinge. Legs and feet dusky grayish
 brown; claws, black.
385. *Icterus bullocki*. ♀ ad.
 2963. 198; 310; 95; 79; culmen, 17.5; gape, 20; tarsus, 24;
 mte., 22; cl., 6.5.
386. *Chrysomitris psaltria psaltria* ♂ ad.
 2964. 113; 204; 64; 45; cul., 10; 10; gape: tars. 13.5:
 Mte., 15; cl., 5.3. Iris hazel.
387. *Chrysomitris psaltria psaltria* ♀ ad.
 2965. 110; 192; 61; 42; cul., 9; gape 9; tars., 12;
 Mte., 13; cl. 4.5.
388. *Geothlypis carolina* ♂ ad. Parent of Set no. 3
 2966. 290; 456; 145; 127; cul., 14; 20; gape; tars., 22;
 Mte., 26; cl. 6.5. Shot from nest on which was sitting
389. *Geothlypis carolina* ♂ ad. Parent of Set no. 2
 2967. 312; 465; 147; 150; cul., 15; gape. 21; tars., 21.5;
 Mte., 25.5; cl., 5.5. Shot from nest on which it was sitting.
- June 4th, 1884. Ft. Verde, A. T.
390. *Chrysomitris psaltria psaltria*. ♂ ad.
 2968. 119; 207; 65; 44; cul., 10; gape 10.5; tars., 13;
 mte., 15; cl., 5.
391. *Geothlypis carolina* ♂ ad.
 2969. 316; 330; 100; 142; cul., 43; nost., 34; gape 45;
 tars., 35; Mte., 32; cl., 9.
392. *Pipilo aberti* ad.
 2970. 230; 293; 92; 114; cul., 17; gape 18; tars., 29;
 Mte., 28; cl., 9.
393. *Empidonax pusillus* (Swains).
 2971. 153; 225; 71; 87; nost. 10; gape 18; tars., 18;
 Mte., 14; cl., 5.
394. *Chrysomitris psaltria psaltria* ♂ ad. #8 juv.
 2972. 111; 200; 58; 48; cul., 9; gape 10; tars., 13;
 Mte., 15; cl., 6.

June 5th, 1884. Verde.

Rode across the Verde to Beaver Creek, and then
 to our horses (Vogdes accompanied me) and walked
 about a mile up the Creek, where I found some
 new birds, and secure some valuable specimens.
Phainopepla nitens was quite numerous. They
 sat upon mesquite bushes upon the steep sloping
 banks of the stream, and could be surprised
 and captured more easily than in any locality
 in which I have hitherto seen them, as the bottom
 of the Canon was ~~then~~ covered with a growth of
 walnut saplings and underbrush which
 sheltered one from their observation.

Pipilo aberti. - A nest found on Beaver Creek
 contained four young which were several days old.
 The nest found June 3rd in a bunch of
 drifted debris on the Verde River, which then contained
 three eggs, had two young & a hatching egg to-day.
Loniophora coerulea. - A mated pair was seen
 amongst the tall sage bushes, and a single male
 afterward shot from a sycamore tree on Beaver.
Loniophora melanocepala. - A pair was seen
 among the mesquite bushes on a mesa a mile
 up the Beaver, but I missed a shot at one of them.

(*Auriparus flaviceps*) - Two nests of the Yellow-
 headed Titmouse were found in the low sagebrush
 on a mesa one mile up Beaver Creek, at quite a
 distance from and elevation above the stream. They
 were only a few rods apart. The parent was seen
 at each nest, and one nest was taken with the
 female parent. Its. Set No. $\frac{a}{4}$. The only note
 of the parent was a sharp ^{metallic} chirp, and she was rather
 shy retiring to the mesquite bushes at a little distance
 and there flitting about and showing unmistakable
 interest & alarm.

Falco communis. - A fine pair of
 adult birds flew down the Canon overhead. I
 could have shot the second bird of the pair
 if I had been prepared; but my hands
 were full of flowers & the Verdin's nest.

Pipilo megalonyx. - One pair in Beaver Creek.

Buteo abbreviatus. - A pair of these Black Hawks were flying over Beaver Creek.

395. *Auriparus flaviceps*. Yellow-headed Tit. ♀ ad.
2973. 110; 168; 50; 47; cul., 9.5; gape, 10; tars., 16; mte., 14; claw, 4. Shot from nest and four eggs.

396. *Phainopepla nitens*. ♀ ad.
2974. 203; 296; 90; 94; cul., 11.4; nost., 7.5; gape, 17; tarsus, 20; mte., 20; cl. 6. Iris, light brownish red. Bill, legs + feet, black, with tinge deeper shade of brown showing in strong light than in the male.

397. *Phainopepla nitens*. ♂ ad.
2975. 210; 296; 90; 101; cul., 11.5; nost., 8.2; gape, 17; tarsus, 18; mte., 18; cl., 5.5. Iris bright red. Bill, legs feet + claws, black.

398. *Phainopepla nitens*. ♂ ad.
2976. 201; 290; 91; 97; cul., 12; nost., 8; gape, 17.3; tarsus, 18; mte., 18; cl., 5.5. Colors as above.

399. *Phainopepla nitens*. ♂ ad.
2977. 207; 300; 94; 104; cul., 12; nost., 8; gape, 18; tarsus, 18; mte., 19; cl., 6. Colors like No. 397.

400. *Phainopepla nitens*. ♂ ad.
2978. 201; 283; 87; 93; cul., 12; nost., 8; gape, 17.5; tarsus, 18; mte., 18; cl., 5. Colors like No. 397.

401. *Geococcyx americanus* ^{*occidentalis*}. ♀ ad.
2979. 310; 430; 148; 165; nost., 20; gape 34; tars., 26; mte., 26.5; cl., 8. Bill orange yellow on mandible and sides of maxilla its basal one half. Mandible brown and terminal one half of maxilla and tip of mandible, black. Legs + feet bluish. Head color - claws brownish black.

402. *Goniaphila cerulea*. ♂ ad.
2980. 176; 290; 88; 71; cul., 17; gape 18.2; tars., 20; mte., 22.5; cl., 7.

403. *Tyrannus verticalis*. ♂ ad.
2981. 225; 417; 126; 100; nost., 15; gape 27; tars., 20; mte., 22; cl., 7.6.

404. *Geothlypis trichas*. ♀ juv.
290; 320; cul., nost., 25. Not skinned.

405. *Scops trichopsis*. ♂ ad.

2982. 227; 575; 173; 90; cere + culmen 21; cere 10; cul. 14; gape 23; tars., (about) 38; mte., 30; cl., 11. Iris yellow - cere greenish bill plumbeous black. Claws horn color at base, black at tip. Stomach contained hair of small mammal.

406. *Empidonax pusillus* (Swains.). ♂ ad.
2983. 155; 220; 70; 65; nost., 9; gape 18.5; tars., 16.5; mte., 15; cl., 5.

June 7th, 1884. Ft. Verde, A. T.
Geothlypis trichas. - Rode through Copper Canyon today, in company with Mr. Vogdes. In a narrow side Canon south of the spring I found a pair of Jays whose nests I was looking for, when from the cedars on the side of the Canon I heard one of the sweetest songs I ever heard. With much difficulty I climbed up the steep wall of broken trap rock, and then ascended the stony sloping hillside until within a few yards of the new vocalist. I did not copy my bird until it was just going to fly from the branch of a cedar, whence it flew down the ravine. I essayed to follow it as it flew from one point to another in the jagged ravine, until it alighted on a cedar on a jutting pinnacle of rock on the opposite side of the ravine high above me. The hillside was steep and covered with broken trap rock. To scale the hillside was like walking up a coal heap, but I advanced until within range, and the bird continued its song from the interior of the cedar branches where my eyes failed to discover. Judging from the sound of its voice I thought it had flown just over the eminence where it was out of sight, and ascended until I stood beneath the tree, when to my chagrin, I

saw this exquisite bird, an old male, sitting only a few feet above me, where I could not secure it. It flew into a mesquite bush and thence at my approach to a dead pine tree, where I took a long shot but failed to hit it, and afterwards followed the notes of its song far down an adjoining ravine but failed to catch sight of the bird again.

Several other birds were seen which were new to me and which I also failed to capture. The nature of the country, the fatigue of climbing in the hot sun, and the necessary noise made in doing so, conspired to make my efforts fail.

On the road up Copper Canyon and again in going down, we saw a number of Black Waxwings (*Phainopepla nitens*), and two male Hooded Orioles (*Icterus cucullatus*) and a number of Rock Squirrels, large and small (*S. grayi* + *S. dorsalis*).

Returning home in the evening, I heard again the singular note of the frog, one of which I captured, which utters a loud bleating sound which is strongly suggestive of a goat's bleat; so much does this note resemble a bleat, that Governor Little's family insisted that they heard the bleat of the mountain sheep or goat, when in Grand Canyon Creek Canon, at the Grand Canyon of the Colorado, where I myself thought that the sound pertained to some such animal. I heard the note and captured specimens both at the Grand Canyon and at the Point of Rocks near Prescott.

Woodhouse's Jay and the Long-spurred Towhee Bunting are both breeding in the Canon.

407. Woodhouse's Jay ♀ ad. Copper Canon
 V 2984 298; 383; 110; 140; cul. 29; gape, 32; tarsus, 36; mte., 30; claw, 9. Iris, dark brown. Bill, legs, feet and claws, black.
408. *Pipilo noticus megalonyx* ♀ ad. Copper Canon
 V 2985 214; 273; 83; 103; cul., 15; gape, 18; tarsus, 28; mte., 26; cl., 8; hind claw, 11. Iris light red. Bill uniformly glossy black. Legs feet & claws, purplish-brown.

June 8th, 1884. Ft. Verde, A. T.

2985^a *Thomomys talpoides umbrinus*. ♂ ad.

No. 103. From tip of nose to eye (skull mutilated) —?; ear, —?; occiput, —?; tail, 180 Tail to end of vertebrae, 85 Length of fore-foot, 24^{longest} cl., 10.6; hind-foot, 27; longest claw, 15.

This species (The Southern Pocket Gopher) is very abundant in this region; but this is the first specimen I have been able to procure, as its subterranean abode makes its capture difficult. This one was killed by a soldier in the Company garden, and its head mangled. Its gray belly, like typical *talpoides*, makes the skin interesting. Note: Abert's Squirrel (*Sciurus aberti*, Woodhouse), is very plentiful in Bill Williams and the San Francisco Mountains, Arizona. When at Ash Fork I was presented by Dr. Bishop with a fine male specimen, which he took, with many others at Flagstaff, Arizona, where the species was abundant during the past winter.

Birds Collected In Arizona Territory.

- ✓ 2644. Corvus corax carnivorus. ♂ ad. March 17, 1884.
Johnston's Cañon, Ash Fork, Arizona.
- ✓ 2645. Sphyrapicus varius nuchalis. ♂ ad. March 17, 1884.
Shot in a cedar-tree. Ash Fork, Arizona.
- ✓ 2646. Sturnella neglecta. ♂ ad. March 15, 1884.
Ash Fork, Arizona.
- ✓ 2647. Lophophanes inornatus. ♂ ad. March 18, 1884.
Ash Fork, Arizona.
- ✓ 2648. Lophophanes inornatus. ♀ ad. March 18, 1884.
Ash Fork, Arizona.
- ✓ 2649. Lophortyx gambeli. ♀ ad. March 18, 1884.
Kell's Cañon, Yavapai Co., Arizona.
- ✓ 2650. Lophortyx gambeli. ♀ ad. March 18, 1884.
Kell's Cañon, Yavapai Co., Arizona.
- ✓ 2651. Lophortyx gambeli. ♀ ad. March 18, 1884.
Kell's Cañon, Yavapai Co., Arizona.
- ✓ 2652. Aphelocoma woodhousei. ♀ ad. March 19, 1884.
Banghart's Rancho, Yavapai Co., Arizona.
- ✓ 2653. Scolecophagus cyanocephalus. ♂ ad. March 19, 1884.
Banghart's Rancho, Yavapai Co., Arizona.
- ✓ 2654. Agelaius phoeniceus sonoriensis. ♂ ad. March 19, 1884.
Banghart's Rancho, Yavapai Co., Arizona.
- ✓ 2655. Stercorarius cyanopectus. ♂ ad. March 19, 1884.
Banghart's Rancho, Yavapai Co., Arizona.
- ✓ 2656. Sialia mexicana. ♂ ad. March 20, 1884.
Prescott, Arizona.
- ✓ 2657. Sitta pygmaea. ♂ ad. March 20, 1884.
Prescott, Arizona.
- ✓ 2658. Carpodacus frontalis. ♂ ad. March 20, 1884.
Prescott, Arizona.
- ✓ 2659. Aphelocoma woodhousei. ♀ ad. March 21, 1884.
Prescott, Arizona.
- ✓ 2660. Sialia mexicana. ♀ ad. March 21, 1884.
Prescott, Arizona.
- ✓ 2661. Melanerpes formicivorus. ♀ ad. March 21, 1884.
Prescott, Arizona.

- ✓ 2662. Melanerpes formicivorus. ♂ ad. March 21, 1884.
Prescott, Arizona.
- ✓ 2663. Melanerpes formicivorus. ♂ ad. March 21, 1884.
Prescott, Arizona.
- ✓ 2664. Glaucopteryx gnoma. ♀ ad. March 21, 1884.
Prescott, Arizona.
- ✓ 2665. Lophophortyx gambeli. ♂ ad. March 21, 1884.
Prescott, Arizona.
- ✓ 2666. Timunculus sparverius. ♀ ad. March 21, 1884.
Prescott, Arizona.
- ✓ 2667. Aphelocoma woodhousei. ♀ ad. March 21, 1884.
Prescott, Arizona.
2668. Cyanocitta stelleri macrolopha. ♂ ad. March 21, 1884.
Prescott, Arizona.
- ✓ 2668. Cyanocitta stelleri macrolopha. ♂ ad. March 22, 1884.
Prescott, Arizona.
- ✓ 2669. Cyanocitta stelleri macrolopha. ♀ ad. March 22, 1884.
Prescott, Arizona.
- ✓ 2670. Aphelocoma woodhousei. ♀ ad. March 22, 1884.
Prescott, Arizona.
- ✓ 2671. Sitta carolinensis aculeata. ♂ ad. March 22, 1884.
Prescott, Arizona.
- ✓ 2672. Sitta carolinensis aculeata. ♂ ad. March 22, 1884.
Prescott, Arizona.
- ✓ 2673. Colaptes auratus mexicanus. ♂ ad. March 22, 1884.
Prescott, Arizona.
- ✓ 2674. Picus villosus harrisi. ♂ ad. March 22, 1884.
Prescott, Arizona.
- ✓ 2675. Picus villosus harrisi. ♀ ad. March 22, 1884.
Prescott, Arizona.
- ✓ 2676. Carpodacus frontalis. ♂ ad. March 22, 1884.
Prescott, Arizona.*
- ✓ 2677. Carpodacus frontalis. ♂ ad. March 22, 1884.
Prescott, Arizona.*
- ✓ 2678. Cathartes mexicanus conspersus. ♀ ad.
March 22, 1884. Prescott, Arizona.

* 161; 253; 79; 67; cul., 10; gape, 11; tarsus, 17;

middle toe + claw, 18; claw, 5. Iris, hazel.

* 160; 255; 80; 70; cul., 11; gape, 12; tarsus, 17; middle
toe + claw, 18; claw, 5. Iris, hazel.

- ✓ 2679. *Lophortyx gambeli*. ♂ ad. March 24, 1884.
Hudson's ranche, Yavapai Co., Arizona.
277; 377; 115; 107; culmen, 11; gape, 13; tarsus, 32;
middle toe and claw, 36; claw, 9. Irides, dark
hazel. Bill, black. Tarsi and toes, olivaceous
bluish-gray; claws, black.
- ✓ 2680. *Picus scalaris* Wagl. Texas Sapsucker. ♀ ad. March 27,
1884. Ft. Verde, Arizona. 185; 333; 99; 68; cul. 21;
gape, 23; tars., 17; middle toe and claw, 21; claw, 8.
- ✓ 2681. *Oreoscoptes montanus* (Fowles.) Baird.
Sage Thrasher. ♂ ad. March 27, 1884. Ft. Verde, Arizona.
222; 323; 98; 95; nost., 11; gape 25; tarsus, 30;
middle toe and claw, 26; claw, 7. Iris, yellow.
- ✓ 2682. *Lophortyx gambeli* Nutt. Gambel's Quail. ♀ ad.
March 28, 1884. Ft. Verde, Arizona.
275; 368; 108; 101; cul., 11; gape, 14; tars., 30;
middle toe and claw, 38; claw, 10. Irides, dark
hazel. Legs and feet, brownish olive-gray; claws, black.
- ✓ 2684. *Zenaidura carolinensis* (Linn.) Sp. Mourning
Dove. ad. March 28, 1884. Ft. Verde, Arizona.
326; 470; 154; 158; cul., 14; gape, 21; tarsus, 27;
middle toe and claw, 26; claw, 6.
- ✓ 2685. *Oxyechus vociferus* (Linn.) Reich. Killdeer. ♂ ad.
March 28, 1884. Fort Verde, Arizona.
240; 512; 159; 97; cul. 20; gape, 21; tarsus, 24;
nate., 26; claw, 6. Bare part of tibia, 18.
- ✓ 2686. *Lophortyx gambeli*, Nutt. Gambel's Quail ♂ ad.
Length, 284; extent, 368. (Presented to Mrs. Perry) April 1st.
- ✓ 2687. *Sturnella vulgaris* (Linn.) Vieill. ♂ ad.
Sparrow Hawk. ^{Ft. Verde, Arizona, April 1, 1884.} 265; 390; 195; 135; base of cere
to tip of maxilla, 14.5; cere, 3.8; cul. fr. cere, 11;
gape, 16.6; tars., 33; middle toe and claw, 31;
claw, 7.5. Iris, hazel. Bill, horn-color at base,
shading ~~into~~ through blue to black on both mandibles.
Cere, legs & feet, orange-yellow; claws, black.
- ✓ 2688. *Micula migratoria propinqua*, Ridgway.
Western Robin. ♂ ad. Ft. Verde, Arizona, April 1, 1884.
262; 330; 140; 115; nostril, 13; gape, 28; tarsus, 34;
middle toe and claw, 29; claw, 7. Irides, hazel.

- Legs and feet, brownish-black, with yellowish tinge
on posterior side of tarsi & under surface of feet.
Bill, yellow; maxill tipped superiorly with black for
a distance of 8 mm.
- ✓ * *Lophortyx gambeli*, Nutt. Gambel's Quail. ♂ ad.
March 28, 1884. Fort Verde, Arizona. 280; 372; 117;
111; culmen, 12; gape, 14; tarsus, 31; middle toe
and claw, 36; claw, 8. Colors of parts the same as No. 2679.
- ✓ 2689. *Poocetes gramineus confinis* Baird. Western Grass
Finch. ♂ ad. April 3, 1884. Ft. Verde, Arizona.
160; 256; 79; 67; cul., 11; gape, 13; tarsus, 22.3; mid-
dle toe and claw, 19; claw, 5.5. Iris, hazel. Bill, with
maxilla & extreme tip of mandible, brownish-black. Lower
mandible, flesh-color. Legs and feet, fleshy-brown;
claws, brown.
- ✓ 2690. *Zonotrichia intermedia*.
gambeli. April 4, 1884. Ft. Verde, Arizona.
176; 248; 78; 73; cul., 12; gape, 13; tarsus, 25; mid-
dle toe and claw, 23; claw, 6. Bill, brownish-yellow,
tipped black on maxilla. Irides, hazel. Tarsi, fleshy
brown. Feet, brown; Claws, brownish-black.
- ✓ 2691. *Helminthophaga luciae*.
Lucy's Warbler. ♂ ad., April 4, 1884. Ft. Verde, Arizona.
118; 183; 59; 47; nost., 7; gape, 11; tars., 17.4; middle
toe & claw, 14; claw, 4. Iris, hazel. Bill, with maxilla
black; mandible, bluish. Legs & feet, dark bluish-gray.
- ✓ 2692. *Vireo pusillus*
♂ ad., April 4, 1884. Ft. Verde, Arizona.
131; 182; 57; 55; bill, measured from nostril, 6.6;
gape, 14.3; tarsus, 19.2; middle toe & claw, 13; claw, 4.
Irides, hazel.
- ✓ 2693. *Pipilo aberti*, Baird. Abert's Towhee. ♂ ad. April 5,
1884. Ft. Verde, Arizona. 236; 296; 92; 119; culmen, 16;
gape, 17.4; tarsus, 30; middle toe & claw, 28; claw, 9.
- ✓ * 2694. *Sialia arctica*, ♂ ad. Rocky Mountain Bluebird.
Ft. Verde, Arizona, April 5, 1884. (Phot by E. W. Means).
185; 348; 110; 76; nostril, 9.5; gape,
21.7; tarsus, 23; middle toe & claw, 21.5; claw, 5.5.
Irides, brown. Bill ^{tarsi} & feet, black.

- ✓ 2695. *Poocetes gramineus confinis*. ♂ ad. April 5, 1884, Ft. Verde, Arizona. 168; 277; 84; 71; culmen, 12; gape, 13.2; tarsus, 22; middle toe + claw, 20; claw, 6.
- ✓ 2696. *Poocetes gramineus confinis*. ♂ ad. April 5, 1884. Fort Verde, Arizona. 168; 274; 82; 69; cul. 11.4; gape, 13.7; tarsus, 22; middle toe and claw, 20; claw, 6.
- ✓ 2697. *Pipilo aberti*, Baird. Abert's Towhee. ♂ adult. April 7, 1884. Ft. Verde, Arizona. 237; 332; 90.5; 116.5; cul., 17; gape, 18; tarsus, 31; middle toe and claw, 29; claw, 9.
- ✓ 2698. *Sturnella neglecta*, Aud. Western Meadow Lark. ♂ ad. April 7, 1884. Ft. Verde, Arizona. 239; 385; 117; 79; culmen, 31.5; gape, 34.2; tarsus, 35.5; middle toe and claw, 31; claw, 8.
- ✓ 2699. *Spizella breweri*, Cass. Brewer's Sparrow. ♂ ad. April 7, 1884. Ft. Verde, Arizona. 145; 203; 63; 67.5; cul., 8.7; gape, 8.8; tarsus, 17.6; middle toe and claw, 17; claw, 4.8. Irides, hazel. Bill above brownish-black; below, flesh-color. Legs and feet, fleshy-brown; claws, blackish.
- ✓ 2700. *Pyrocephalus rubineus mexicanus* (Sel.) Coues. Vermilion Flycatcher. ♂ ad. April 7, 1884. Ft. Verde, Arizona. 156; 268; 82; 65; culmen, 13.7; nostril, 9.2; gape, 18; tarsus, 16.2; middle toe and claw, 14; claw, 4.7. Iris, hazel. Bill, legs, feet + claws, black; lower mandible showing a tinge of brown in the middle, at base.
- ✓ 2701. *Pyrocephalus rubineus mexicanus* (Sel.) Coues. ♂ ad. April 7, 1884. Ft. Verde, Arizona. 154; 261; 80; 65; culmen, 15; nostril, 10; gape, 19.2; tarsus, 16.5; middle toe and claw, 15; claw, 5. Irides, hazel. Bill, legs, feet + claws, black.
- ✓ 2702. *Pyrocephalus rubineus mexicanus* (Sel.) Coues. ♂ ad. Mated with No. 2700. April 7, 1884. Ft. Verde, Arizona. 152; 263; 79.5; 63.5; culmen, 14; nostril, 9.8; gape, 19.5; tarsus, 16.2; middle toe and claw, 15.5; claw, 5. Irides, hazel. Bill, legs, feet + claws, black.
- ✓ 2703. *Pyrocephalus rubineus mexicanus* (Sel.) Coues. ♂ ad. Mated with No. 2702. April 7, 1884. Ft. Verde, Arizona. 152; 260; 80; 63; culmen, 14; nostril, 9; gape, 18.3; tarsus, 17; middle toe and claw, 15; claw, 5. Irides, hazel. Bill, legs, feet + claws, black.

- ✓ 2704. *Sialia arctica*, Swains. Rocky Mountain Bluebird. ♂ ad. April 8, 1884, Ft. Verde, Arizona (*Shot by Ella W. Means). 183; 345; 114; 75; nostril, 10; gape, 21; tarsus, 22.5; middle toe + claw, 22; claw, 6.5. Iris, hazel. Bill, legs and feet, black.
- ✓ 2705. *Sialia arctica*, Swains. ♂ ad. April 8, 1884. Ft. Verde, Arizona (*Shot by Ella W. Means). 180; 342; 111; 71; bill, measured from nostril, 10; gape, 21; tarsus, 22.6; middle toe and claw, 21; claw, 5.8. Colors of parts the same as No. 2704, above.
- ✓ 2706. *Sialia mexicana*, Swains. Californian Bluebird. ♂ ad. April 8, 1884. Ft. Verde, Arizona. 173; 316; 102.5; 65; nostril, 9; gape, 19.2; tarsus, 20; middle toe + claw, 20.4; claw, 5.2. Iris, hazel. Bill, feet + claws, black. (*Shot by Ella W. Means.)
- * 2707. *Xanthocephalus icterocephalus* (Bonap.). ♂ ad. Yellow-headed Blackbird. ♂ ad. April 9, 1884. Fort Verde, Arizona (*Shot by Ella W. Means). 276; 457; 144; 114; cul., 23; gape, 24; tars., 35.6; middle toe and claw, 37; claw, 12.
- ✓ 2708. *Scolecophagus cyanocephalus* (Wagl.) Caban. Brewer's Blackbird. ♂ ad. April 9, 1884. Ft. Verde, Arizona. 268; 423; 132; 115; culmen, 22; gape, 24; tarsus, 33; middle toe + claw, 31.5; claw, 8. Iris, straw-yellow. Bill + feet, black.
- ✓ 2709. *Spizella breweri*, Cass. Brewer's Sparrow. ♂ ad. April 10, 1884. Fort Verde, Arizona. 142; 209; 64; 70; culmen, 9.6; gape, 10; tarsus, 17; middle toe and claw, 16.5; claw, 4. Irides, hazel.
- ✓ 2710. *Amphispiza bilineata* (Cass.) Coues. Black-throated Sparrow. ♂ ad. April 10, 1884. Ft. Verde, Arizona. 144; 220; 66; 70; culmen, 11; gape, 13; tarsus, 19.4; middle toe and claw, 17.5; claw, 5.5. Iris, hazel. Bill with maxilla bluish-black; mandible ~~the~~ gray-blue narrowly tipped with black. Tarsi + feet, bluish-dusty brown; claws blackish.
- ✓ 2711. *Dryocopus nigricans* (Swains.) ♂ sp. Black Pewee. ♂ ad. April 10, 1884. Fort Verde, Arizona Territory. 175; 280; 85; 78; bill from nostril, 10.3; gape, 20.5.

- tarsus, 17; middle toe + claw, 14.6; claw, 5. Iris, hazel. Bill, legs, feet + claws, black.
- ✓ 2712. *Harpophynchus cryssalis*, Henry. Red-vented Thrasher. ♂ ad. April 10, 1884. Fort Verde, Arizona. 306; 320; 97; 144; culmen, 40.4; nostril, 32; gape, 43.5; tarsus, 34; middle toe and claw, 31; claw, 9. Iris, yellowish-brown. Bill, black. Legs and feet, brownish-black; claws, blackish.
- ✓ 2713. *Pipilo aberti* Baird. Abert's Towhee ad. April 10, 1884. Fort Verde, Arizona. 230; 286; 87; 119; culmen, 15; gape, 17; tarsus, 29; middle toe + claw, 27.3; claw, 9.
- ✓ 2714. *Oxyechus vociferus* (Linn.) Reich. Killdeer. ♂ ad. April 10, 1884. Fort Verde, Arizona. 255; 495; 160; 102; culmen, 18.5; gape, 22; tarsus, 35; middle toe and claw, 26; claw, 4.5; bare part of tibia, 20. Bare skin (a slender circle) around eye, red. Iris dark hazel. Bill, black; bare part of tibiae and the tarsi, greenish flesh-color. Feet, yellowish flesh-color; claws, black.
- ✓ 2715. *Oxyechus vociferus* (Linn.) Reich. ♂ ad. April 10, 1884. Fort Verde, Arizona. 260; 519; 165; 105; culmen, 22; gape, 23; tarsus, 36.6; middle toe and claw, 27; claw, 6; Bare tibia, 19. Colors like No. 2714. Ovary contained an egg 9 m.m. in diameter.
- ✓ 2716. *Oxyechus vociferus* (Linn.) Reich. ♂ ad. April 10, 1884. Fort Verde, Arizona. 252; 515; 164; 104; culmen, 21; gape, 21; tarsus, 36; middle toe and claw, 26; claw, 5.5. Colors like No. 2714.
2717. *Xanthocephalus icterocephalus* (Bonap.) Baird. Yellow-headed Blackbird. ♂ ad. April 10, 1884. Fort Verde, Arizona. 275; 458; 148; 117; culmen, 23; gape, 22; tarsus, 35; middle toe and claw, 37; claw, 11.
2718. *Buteo borealis calurus* ^{Spur.} April 10, 1884. Fort Verde, Arizona. 547; 1275; 386; 245; cere + culmen, 35; cere, 14; culmen, 24.4; gape, 41; tarsus, 83; middle toe and claw, 61; claw 23. Irides, yellow. Cere, ~~dark~~ yellow. Bill, bluish at

- base, shading into black.
- ✓ 2719. *Harpophynchus cryssalis*, Henry. Red-vented Thrasher. ♂ ad. April 11, 1884. Fort Verde, Arizona. 305; 318; 95; 140; culmen, 38.5; gape, 42; nostril, 30.5; tarsus, 33; middle toe and claw, 29.4; claw, 7.6. Irides, yellow. Bill, black. (* Shot by Ella W. Mearns).
- ✓ 2720. *Oreoscoptes montanus* (Lown.) Baird. Sage Thrasher. ♂ ad. April 11, 1884. Fort Verde, Arizona. 217; 302; 98; 93; bill, measured from nostril, 12; gape, 24.5; tarsus, 31; middle toe and claw, 25; claw, 7. Iris, yellow. (* Shot by Ella W. Mearns).
- * 2721. *Myiarchus cinerascens*. (* Shot by E. W. M.) ♂ ad. April 11, 1884. Fort Verde, Arizona. 220; 327; 104; 104 (same as wing); bill, measured from nostril, 14; gape, 27; tarsus, 24.5; middle toe and claw, 20; claw, . The first of its species seen.
- ✓ 2722. *Oreoscoptes montanus* (Lown.) Baird. Sage Thrasher. ♂ ad. April 11th, 1884. ^{Fort Verde, Arizona} 227; 315; 95; 100; nostril, 12.2; gape, 26; tarsus, 31; middle toe + claw, 25.5; claw, 6. Irides, yellow.
- ✓ 2723. *Oreoscoptes montanus* (Lown.) B. ♂ ad. April 11, 1884. Fort Verde, Arizona. 223; 319; 98; 99; bill, measured from nostril, 13; gape, 26; tarsus, 31; middle toe and claw, 25; claw, 6. Iris, yellow. This specimen is cross-billed; a congenital malformation.
- ✓ 2724. *Oreoscoptes montanus* (Lown.) B. ♂ ad. April 11, 1884. Fort Verde, Arizona. 223; 315; 95; 92; bill, measured from nostril, 11.5; gape, 24; tarsus, 32.5; middle toe and claw, 26; claw, 6.5. Irides, yellow.
- ✓ 2725. *Geococcyx californianus* (Linn.) Baird. Road-runner; Chaparral Cock. ♂ ad. April 12, 1884. Fort Verde, Arizona. 612; 565; 182; 300; culmen, 53; gape, 71; bill from nostril, 39.5; tarsus, 65; middle toe and claw, 48; claw, 13.5. Eyes, with a narrow, bright yellow circle around pupil; second-ary iris, which is wide, bright hazel. Bill, with maxilla blackish, with an olive tint; mandibles greenish-olive, tipped with black. Legs and feet, greenish-gray. ^{claws black} Stomach contained a lizard 210 m.m. in length.

2726. *Empidonax obscurus*?

♂ ad. April 12, 1884. Fort Verde, Arizona. 143; 230; 72; 63; bill, measured from nostril, 8; gape, 16.5; tarsus, 16; middle toe and claw, 14.5; claw, 5.3. Iris, hazel.

2727. *Tyrannus vociferans*.

♂ ad. April 12, 1884. Fort Verde, Arizona. 225; 400; 126; 99; bill, measured from nostril, 24; gape, 27; tarsus, 18; middle toe & claw, 22; claw, 8. Iris, hazel. Bill, feet and claws, black.

2728. *Sayornis sayi* (Bonap.) Baird. Say's Pewee.

♂ ad. April 12, 1884. Ft. Verde, Arizona. 201; 337; 107; 90; bill, measured from nostril, 11.5; gape, 23.7; tarsus, 20; middle toe and claw, 18.4; claw, 7. Iris, hazel. Bill, legs, feet and claws, black. April 12-1884. Ft. Verde.

2729. *Sayornis nigricans* (Swainson) Bp. Black Pewee. ♂ ad.

190; 299; 94; 87; bill, measured from nostril, 11.5; gape, 21; tarsus, 18; middle toe and claw, 15; claw, 5.4. Iris, hazel. Bill, feet & claws, black.

2730. *Pyrocephalus rubineus mexicanus* (Sel.) Coues.

Vermilion Flycatcher. ♂ ad. April 12, 1884. Ft. Verde, Arizona. 156; 255; 79; 65; bill, measured from nostril, 9; gape, 18; tarsus, 16; middle toe and claw, 14; claw, 5.

2731. *Pyrocephalus rubineus mexicanus* (Sel.) Coues. ♂ ad.

April 12, 1884. Ft. Verde, Arizona. 153; 260; 79; 63; bill, measured from nostril, 9.5; gape, 19; tarsus, 16; middle toe and claw, 15; claw, 5.

2732. *Junco oreganus* (Linn.) Vieill. Sparrow Hawk.

♂ ad. April 12, 1884. Fort Verde, Arizona. 278; 595; 190; 140; cere + culmen, 16; cere, 5; culmen, 17; gape, ; tarsus, 36; middle toe + claw, 34; claw, 10.3.

2733. *Zenaidura macroura* (Linn.) Bp. Mourning Dove.

♂ ad. April 12, 1884. Ft. Verde, Arizona. 295; 465; 154; 137; culmen, 15; gape, 22; tarsus, 21.5; middle toe and claw, 28; claw, 7.

2734. *Pipilo aberti*, Baird. ♂ ad. April 12, 1884

Fort Verde, Arizona. 240; 300; 94; 117; culmen, 16; gape, 17; tarsus, 30; middle toe & claw, 27; claw, 9.3.

2735. *Amphispiza bilineata* (Coss.) Coues. Black-throated Sparrow. ♂ ad., April 12, 1884. Ft. Verde, Arizona. 145; 210; 65; 65; culmen, 12; gape, 12; tarsus, 19.5; middle toe & claw, 17.6; claw, 5.3.

2736. *Zonotrichia intermedia*.

♂ ad. April 12, 1884. Fort Verde, Arizona. 167; 250; 77; 77; culmen, 11.5; gape, 13; tarsus, 23; middle toe and claw, 22.5; claw, 6. Iris, hazel. Bill, yellow, with maxilla tipped with dusky brown. Tarsi, yellowish flesh-color. Feet, brown; claws, brownish-black. Moulting just passed.

2737. *Zonotrichia intermedia*.

♂ ad. April 12, 1884. Fort Verde, Arizona. 175; 250; 75; 76; culmen, 11; gape, 13.5; tarsus, 23.5; middle toe and claw, 22.5; claw, 6. Moulting.

2738. *Zonotrichia intermedia*.

♂ ad., April 12, 1884. Ft. Verde, Arizona.

2739. *Trochilus alexandri* Black-chinned Hummingbird. ♂ ad. April 15, 1884. Ft. Verde, Arizona.

Measurements of No. 2738. 163; 235; 72; 73; culmen, 12; gape, 13; tarsus, 22; middle toe and claw, 21; claw, 6. A few brown feathers on crown of crown.

2740. *Dendroica aestiva* (Linn.) Baird. Summer Yellow Bird.

♂ ad. April 15, 1884. Ft. Verde, Arizona. 133; 204; 64; 52; bill, measured from nostril, 8; gape, 14; tarsus, 18; middle toe and claw, 14.5; claw, 4.

2741. *Empidonax hammondi* (Xantus).

ad. April 15th, 1884. Ft. Verde, Arizona.

2742. *Picus scalaris*, Wagl. Texas Sapsucker. ♂ ad. April 15, 1884. Ft. Verde, Arizona. 189; 327; 101; 68; culmen, 23; gape, 25; tarsus, 16.5; middle toe and claw, 20; claw, 7.7. Iris, dark red.

2743. *Lanius ludovicianus excubitorides* (Sw.) Coues.

White-rumped Shrike. ad. April 15, 1884. Fort Verde, Arizona. 231; 324; 100; 106; culmen, 16.5; gape, 25; tarsus, 27; middle toe & claw, 24; claw, 7. Iris, hazel. Bill and feet, black.

- ✓ 2744. *Lophortyx gambeli*, Nutt. Gambel's Quail. ♂ ad.
April 15, 1884. Fort Verde, Arizona.
280; 368; 110; 101; culmen, 11.5; gape, 14; nostril, 8;
tarsus, 33; middle toe and claw, 37; claw, 10.5.
- ✓ 2745. *Sturnella neglecta*, Aud. Western Meadow Lark. ♀ ad.
April 15, 1884. Ft. Verde, Arizona. 230; 375; 113; 73;
culmen, 29.4; gape, 33; tarsus, 33; middle toe and
claw, 32; claw, 7.5.
- ✓ 2746. *Pipilo aberti*, Baird. Abert's Towhee. ♀ ad. April 15,
1884. Ft. Verde, Arizona. 233; 284; 88; 115; culmen,
15.5; gape, 16.5; tarsus, 28; middle toe and claw, 26;
claw, 8. Contained an egg measuring 23x17 mm,
and several smaller ones. The egg-shell was becoming
calcified.
- ✓ 2747. *Salpinctes obsoletus* (Say) Cuban. Rock Wren. ♂ ad.,
April 16th, 1884. Squaw Peak, mining camp, near
Fort Verde, Arizona. 157; 234; 72; 58; bill
measured from nostril, 14.5; gape, 26; tarsus, 21.5;
middle toe and claw, 19; claw, 5. Iris, grayish-
brown. Bill, blackish above; lower mandible,
horn color at base, dusky at tip. Legs, feet and
claws, brownish-black.
- ✓ 2748. *Pipilo maculatus megalonyx* (Baird) Coues.
Spurred Towhee. ♂ ad. April 16th, 1884. Henry
Clay Mining Claim near Fort Verde, Arizona.
216; 279; 87; 106; culmen, 13.5; gape, 17; tarsus,
27.5; middle toe and claw, 37; claw, 8. Irides, bright
red. Bill, black. Tarsi and claws, light brown.
Feet, dusky brown.
2749. *Tyrannus verticalis*.
♂ ad. April 16, 1884. Fort Verde, Arizona.
220; 397; 124; 73; bill, measured from nostril, 14;
gape, 26; tarsus, 20; middle toe and claw, 21;
claw, 7. Iris, hazel. Bill and feet, black.
- ✓ 2750. ~~*Lanius ludovicianus*~~ *Calamospiza bicolor* (Townsend)
Bonap. Lark Bunting. ♂ ad. April 17, 1884.
Fort Verde, Arizona. 175; 302; 89; 73; cul., 14;
gape, 15.4; tarsus, 26; middle toe and claw, 24;
claw, 6; Bill, with maxilla dusky olive-brown;

- mandible with a dusky line along gape, and dusky
at point; residue, pale blue. Tarsi, brown; feet and
claws, brownish-black.
- ✓ 2751. *Calamospiza bicolor* (Townsend) Bonap. Lark Bunting.
♀ ad. April 17, 1884. Fort Verde, Arizona.
168; 276; 92; 66; culmen, 14; gape, 15; tarsus, 23
middle toe and claw, 23; claw, 6.5. Iris, hazel.
Bill, dusky brownish-olive on maxilla; mandible pale
blue. ^{tarsi brown} Feet and claws, brownish-black.
2752. *Xanthocephalus icterocephalus* (Bonap.) Baird.
Yellow-headed Blackbird. ♂ ad. April 17, 1884.
Fort Verde, Arizona. 278x 462.
2753. *Xanthocephalus icterocephalus* (Bonap.) ♂ ad.
April 17, 1884. Fort Verde, Arizona. 272; 450;
143; 109; culmen, 25; gape, 26; ^{tarsus 26.5} middle toe
and claw, 37.5; claw, 11. Irides, hazel.
Bill, legs, feet and claws, black.
2754. *Xanthocephalus icterocephalus* (Bonap.) ♂ ad. ♂ ad.
Head all yellow. April 17, 1884. Ft. Verde, Arizona.
278; 464; 144; 115; culmen, 24; gape, 25; tarsus,
37; middle toe and claw, 38; claw, 11.5. Colors
like those of No. 2753.
- ✓ 2755. *Lophortyx gambeli*, Nutt. Gambel's Quail. ♂ ad.
April 18, 1884. Copper Cañon, near Fort Verde,
Arizona. 283; 360; 107; 102; culmen, 10.5; gape,
14; tarsus, 29.5; middle toe and claw, 38; claw, 7.
- ✓ 2756. *Lophortyx gambeli*, Nutt. ♂ ad. April 18, 1884,
Copper Cañon, near Fort Verde. 281x 273.
- ✓ 2757. *Apelocoma woodhousei* (Baird) Ridgw. Wood-
house's Jay. ♂ ad. April 19, 1884. Banks of the
Agua Fria, near Whipple Barracks, Arizona.
305; 410; 127; 148; culmen, 29; gape 33; tarsus
40; middle toe and claw, 31; claw, 9. Irides, hazel.
Bill, feet and claws, black.
- ✓ 2758. *Eremophila alpestris adusta* fide Dwight.
Shore Lark. ♂ ad. April 19, 1884. Between Ash
Creek and the Agua Fria on the Verde road.
177; 330; 104; 70; culmen, 13.5; bill, measured
from nostril, 4.5; gape, 17; tarsus, 22; middle

toe and claw, 18; claw, 5.3. Irides, hazel. Bill, with maxilla black; mandible, bluish, horn-color, shading into black at tip. Tarsi and toes blackish.

✓ 2759. *Eremophila alpestris adusta* (identified by Dwight).

Shore Lark. ♂ ad. April 19, 1884. Between Ash Creek and the Agua Fria, on the Verde road. 180; 328; 105; 74; culmen, 12; bill from nostril, 9; gape, 17; tarsus, 22; middle toe and claw, 11.5. Colors of parts like No. 2758.

✓ 2760. *Eremophila alpestris adusta* (identified by Dwight).

Shore Lark. ♀ ad. April 19, 1884. Between Ash Creek and the Agua Fria, on the Verde road. 166; 312; 96; 65; cul, 12; bill from nostril, 9.5; gape, 15.5; tarsus, 21.5; middle toe and claw, 17; claw, 6.

✓ 2761. *Pipilo maculatus megalonyx* (Bd.) Coes. Spurred Towhee.

♀ ad. April 19, 1884. Shot beside the Agua Fria, near Whipple Barrack, Yavapai Co., Arizona. 218; 272; 84; 103; cul, 14; gape, 17; tarsus, 27; middle toe and claw, 27; cl., 8.5. Iris, red. Bill, black. Tarsi, ^{claws} ~~feet~~ brown; feet, dusky-brown.

✓ 2762. *Junco hyemalis shufeldti*. ♀ ad.

♀ ad. Near Whipple Barracks, Prescott, Arizona. April 19, 1884. 157; 240; 72.5; 72; culmen, 11; gape, 12.7; tarsus, 20; middle toe and claw, 19.5; claw, 5.4. Singing when shot.

✓ 2763. *Oreoscoptes montanus* (Lown.) Baird. Sage Thrasher.

♂ ad. Between Ash Creek and the Agua Fria, on the Verde Road. April 19, 1884. 217; 313; 97; 94; bill, measured from nostril, 14; gape, 24; tarsus, 31; middle toe and claw, 26; claw, 7.

✓ 2764. *Sitta pygmaea*, Vig. Pygmy Nuthatch. ♂ ad.

Whipple Barracks, Arizona. April 21, 1884. 110; 205; 66; 40; cul., 14; gape, 17; nostril, 10.5; tarsus, 15.5; middle toe and claw, 15.6; cl., 5.

✓ 2765. *Sitta pygmaea*, Vig. ♂ ad. April 21, 1884.

Whipple Barracks, Prescott, Arizona. 112; 205; 63; 46; culmen, 14; nostril, 10.5; gape, 17; tarsus, 15; middle toe and claw, 16.5; claw, 5.5.

✓ 2766. *Melanerpes formicivorus* (Sw.) Kp. California Woodpecker. ♂ ad. April 21, 1884. Whipple Barracks, Arizona. 246; 457; 142; 92; culmen, 25.3; gape, 30; tarsus, 21; "middle" toe and claw, 26; claw, 9. Irides, White. Bill and claws, bluish-black. Legs and feet, lead-color.

✓ 2767. *Cyanocitta stelleri macrolopha* (Baird) Ridgway.

Long-crested Jay. ♀ ad. 303; 450; 137; 130; culmen, 28; gape, 34; tarsus, 45; middle toe and claw, 32; claw, 9. Bill, "legs," feet and claws, black. Whipple Barracks, Arizona. April 21, 1884.

✓ 2768. *Dendroica aestiva* (Sm.) Bd. Summer Yellow Bird.

♂ ad. April 22, 1884. Whipple Barracks, Arizona. 130; 200; 64; 50.5; bill, measured from nostril, 7; gape, 13.5; tarsus, 19; middle toe and claw, 14.5; claw, 4.7.

✓ 2769. *Salpinctes obsoletus* (Say) Cuban. Rock Wren. ♂ ad.

April 22. Whipple Barracks, Prescott, Arizona. 150; 230; 69; 56; bill, measured from nostril, 13; culmen, 18.5; gape, 22; tarsus, 20.5; middle toe and claw, 18; claw, 5. Irides, hazel. Bill, with maxilla black; mandible, horn-color at base, shading into blackish at tip. Legs, feet and claws, black.

✓ 2770. *Junco cinereus*.

♂ ad. April 22, 1884. Whipple Barracks, Arizona. 163; 257; 80; 77; culmen, 12; gape, 12; tarsus, 20.5; middle toe and claw, 20; claw, 6.

✓ 2771. *Linumunculus sparverius* (Linn.) Vieill. Sparrow Hawk.

♀ ad. April 22, 1884. Whipple Barracks, Prescott, Arizona. 275; 388; 188; 138; culmen including cere, 15.4; cere, 4; culmen from cere, 11.5; gape, 18; tarsus, 36; middle toe and claw, 31; claw, 9.

✓ 2772. *Aphelocoma woodhousei* (Baird) Ridgway.

Woodhouse's Jay. ♀ ad. April 23, 1884. Whipple Barracks, Prescott, Arizona. 290; 387; 121; 134; culmen, 27; gape, 32; tarsus, 39; middle toe and claw, 29; claw, 9.

✓ 2773. *Aphelocoma woodhousei* (Bd.) Ridg. Woodhouse's Jay.

♂ ad. April 23, 1884, Whipple Barracks, Arizona. (275; 387; 121; 134)

- 312; 404; 130; 153; Culmen, 26.5; gape, 31; tarsus, 37; middle toe and claw, 31; claw, 9; Irides, hazel. Bill, legs, feet and claws, black.
- ✓ 2774. *Melanerpes formicivorus* (Sw.) Bp. Californian Woodpecker. ♂ ad., April 23, 1884. Whipple Barracks, Arizona. 242; 452; 141; 89; culmen, 26.4; gape, 29; tarsus, 21.5; middle toe and claw, 26; claw, 7. Colors like No. 2766.
- ✓ 2775. *Colaptes auratus mexicanus* (Sw.) Ridgway. Red-shafted Flicker. ♀ ad., April 23, 1884. Whipple Barracks, Arizona. 310; 520; 154; 114; culmen, 35.5; gape, 40.5; tarsus, 28; middle toe and claw, 34; claw, 11. Irides, dark red. Bill, bluish-black. Legs and feet, bluish-gray; claws, dark bluish-gray.
- ✓ 2776. *Lanius ludovicianus excubitorides*. ♂ ad., April 23, 1884. Whipple Barracks, Arizona. 234; 332; 99; 107; culmen, 17; gape, 24; tarsus, 28.5; middle toe and claw, 24; claw, 7. Irides, hazel. Bill, legs feet and claws, black.
- ✓ 2777. *Sialia mexicana*, Swains. Californian Bluebird. ♂ ad., April 23, 1884. Whipple Barracks, Arizona. 173; 320; 105; 69; bill, measured from nostril, 9; gape, 19; tarsus, 19.5; middle toe and claw, 20; claw, 6. Irides, hazel. Bill, legs, feet & claws, black.
- ✓ 2778. *Salpinctes obsoletus* (Say) Caban. Rock Wren. ♂ ad., April 23, 1884. Whipple Barracks, Arizona. 99; 230; 71; 57; bill, measured from nostril, 13.5; gape, 23; Culmen, 17.3; tarsus, 20; middle toe & claw, 18; claw, 4.7.
- ✓ 2779. *Spizella domestica arizonae* (Cous.) Ridgway. Western Chipping Sparrow. ♂ ad., April 23, 1884. Whipple Barracks, Arizona. 149; 232; 74; 70; culmen, 10; gape, 11.5; tarsus 18; middle toe and claw, 17; claw, 4.
- ✓ 2780. *Cyanocitta stelleri macrolopha* (Baird) Ridgway. Long-crested Jay. ♂ ad., April 25, 1884. Shot among the low oak bushes near the Agua Fria, between Whipple Barracks and Fort Verde, Arizona. 348; 475; 146; 149; culmen, 30; gape, 34; tarsus, 45; middle

- toe and claw, 32; claw, 9.
- ✓ 2781. *Cyanocitta stelleri macrolopha* (Baird) Ridgway. ♂ ad., April 25, 1884. Banks of the Agua Fria, on the road from Whipple Barracks to Fort Verde, Arizona. 326; 485; 155; 148; culmen, 31; gape, 35.7; tarsus, 46; middle toe and claw, 33; cl. 10.
- ✓ 2782. *Aphelocoma woodhousei* (Bd.) Ridg. Woodhouse's Jay. ♂ ad., April 25, 1884. Near Whipple Barracks, Arizona. 322; 433; 134; 156; culmen, 29; gape, 34; tarsus, 41; middle toe and claw, 32; claw, 9. Irides, hazel. Bill, legs, feet & claws, black.
- ✓ 2783. *Aphelocoma woodhousei* (Bd.) Ridg. Woodhouse's Jay. ♂ ad. 296; 389; 121; 143; culmen, 26.2; gape, 30; tarsus, 39; middle toe and claw, 27.5; claw, 8. April 25, 1884. Near Whipple Barracks, Arizona.
- ✓ 2784. *Aphelocoma woodhousei* (Bd.) Ridg. Woodhouse's Jay. ♂ ad. April 25, 1884. Agua Fria, on the road from Whipple Barracks to Ft. Verde, Arizona. 314; 409; 125; 150; culmen, 28; gape, 32; tarsus, 41; middle toe and claw, 31; claw, 9.
- ✓ 2785. *Lanius ludovicianus excubitorides* (Sw.) Coues. White-rumped Shrike. ♂ ad., April 25, 1884. Near Spaulding's ranche on the road from Whipple Barracks to Fort Verde, Arizona. 238; 328; 99; 107; culmen, 17; gape, 26; tarsus, 27; middle toe and claw, 23.5; claw, 7.
- ✓ 2786. *Lophortyx gambeli*, Nutt. Gambel's Quail. ♂ ad. Near Spaulding's ranche, on the road from Whipple Barracks to Fort Verde, Arizona. April 25, 1884. 282 x 373. (For Louis A. Zappa).
- ✓ 2787. *Lophortyx gambeli*, Nutt. Gambel's Quail. ♂ ad. Near Spaulding's ranche, on the road from Whipple Barracks to Fort Verde, Arizona. April 25, 1884. 272 x 368. (For Louis A. Zappa).
- ✓ 2788. *Lophortyx gambeli*, Nutt. Gambel's Quail. ♂ ad. Near Spaulding's ranche, on the road from Whipple Barracks to Fort Verde, Arizona. April 25, 1884. 287; 368; 113; 109; culmen, 11.5; gape, 14; tarsus, 30; middle toe and claw, 35.5; claw, 10.

- ✓ 2787. *Lophortyx gambeli*, Nutt. Gambel's Quail. ♂ ad.
286; 378; 113; 103; culmen, 11; gape, 14; tarsus, 33;
middle toe and claw 38; claw, 9. Near Spaulding's
ranch, on the Verde road. April 25, 1884.
- ✓ 2790. *Lophortyx gambeli*, Nutt. Gambel's Quail. ♂ ad.
280; 371; 112; 105; culmen, 11.7; gape, 15; tarsus,
33.5; middle toe and claw, 37; claw, 9.5. Ash Creek
Arizona,
at Hudson's ranch, April 25, 1884.
- ✓ 2791. *Lophortyx gambeli*, Nutt. Gambel's Quail. ♂ ad.
Ash Creek near Hudson's ranch, on the Verde Road,
Arizona, April 25, 1884.
277; 367; 112; 105; culmen, 11; gape, 13.8;
tarsus, 31; middle toe and claw, 37; claw, 8.4.
- ✓ 2792. *Lophortyx gambeli*, Nutt. Gambel's Quail. ♀ ad.
Near Spaulding's ranch, on the road between Whipple
Baracks and Prescott, Arizona. April 25, 1884.
282; 375; 112; 99; culmen, 11.5; gape, 14.7;
tarsus, 32.5; middle toe and claw, 35; claw, 9.
- ✓ 2793. *Spinunculus spurius* (Linn.) Vieill. Sparrow
Hawk. ♀ ad. April 26, 1884. Cherry Creek, near
Fort Verde, Arizona. 290; 618; 202; 145; culmen
including cere, 16; cere, 5; culmen from cere, 12.5;
tarsus, 37; middle toe and claw, 33; claw, 10.
- ✓ 2794. *Cypselus saxatilis*, Woodh. White-throated Swift.
♀ ad. April 26, 1884. Cherry Creek, near Fort Verde,
Arizona. 150; 324; 133; 62; culmen, 6; bill, measured
from nostril, 3.7; gape, 15; tarsus, 9; middle toe
and claw, 11; claw, 6. Iris, hazel. Bill, black. Tarsi
and toes, flesh-color, sparsely feathered; claws,
fleshy-brown.
- ✓ 2795. *Lophortyx gambeli*, Nutt. Gambel's Quail. ♂ ad.
April 26, 1884. Cherry Creek, near Ft. Verde, Arizona.
274; 360; 107; 94; culmen, 10.3; gape, 14; tarsus,
32; middle toe and claw, 35.5; claw, 8.2.
- ✓ 2796. *Lophortyx gambeli*, Nutt. Gambel's Quail. ♂ ad.
April 26, 1884. Cherry Creek, near Ft. Verde, Arizona.
282; 377; 116; 101; culmen, 11.3; gape, 13.8;
tarsus, 31.5; middle toe and claw, 39; claw, 10.
- * 2797. *Mimus polyglottus* (Linn.) Boie. Mockingbird.
♂ ad. April 28, 1884. Fort Verde, Arizona.
255; 360; 110; 124; nostril, 17; gape, 26;

- tarsus, 33; middle toe and claw, 30; claw, 8. Irides,
yellow. Bill, legs, feet and claws, black (*Shot by E. L. M.).
- ✓ 2798. *Carpodacus frontalis* (Say) Gray. House Finch. ♂ ad.
155; 253; 77; 70; culmen, 9.5; gape, 10.5; tarsus
17; middle toe and claw, 19; claw, 5.5. Ft. Verde, April 28.
- ✓ 2799. *Geothlypis trichas*, Henry. Red-vented Thrasher.
♀ ad. April 29, 1884. Ft. Verde, Arizona. 290; 364;
92; 138; bill, measured from nostril, 26.5; gape, 29;
tarsus, 31.5; middle toe and claw, 31; claw, 5.
Irides, pale yellowish-brown. Bill, black. Legs and
feet, dusky greenish-olive.
- ✓ 2800. *Geothlypis trichas*, Henry. Red-vented Thrasher.
♂ April 29, 1884. Ft. Verde.
A pair of the year. The above specimen (No. 2799) is
its parent, as they were together. 252 X 300.
- ✓ 2801. *Chondestes grammacus*
Black Finch. ♂ ad. April 29, 1884. Fort Verde, Arizona.
178; 287; 91; 79; culmen, 12.8; gape, 15; tarsus, 21;
middle toe and claw, 20.4; claw, 5.
- ✓ 2802. *Chondestes grammacus*
Lark Finch. ♂ ad. April 29, 1884. Fort Verde, Arizona.
173; 280; 88; 78; culmen, 12.3; gape, 14; tarsus,
20.5; middle toe and claw, 19.4; claw, 5.
- ✓ 2803. *Coleophagus cyanocephalus* (Wagl.) Caban. Brewer's
Blackbird. ♂ ad. April 29, 1884. Fort Verde, Arizona.
260; 422; 132; 111; culmen, 20.5; gape, 24; tarsus,
33; middle toe and claw, 30; claw, 7.5. Iris, yellow;
Bill, legs, feet and claws, black.
- ✓ 2804. *Picus scalaris*, Wagl. Texas Sapsucker. ♀ ad.
April 29, 1884. Fort Verde, Arizona. 185; 320;
99; 71; culmen, 21.4; gape, 23.5; tarsus, 17.7;
"middle" toe and claw, 19; claw, 8.
- ✓ 2805. *Chondestes grammacus*
Lark Finch. ♂ ad. April 29, 1884. Fort Verde, Arizona.
183; 294; 92; 79; culmen, 14; gape, 15.8; tarsus,
22.7; middle toe and claw, 22; claw, 6.5.
- ✓ 2806. *Pyrocephalus rubinus mexicanus* (Sci.) Coues.
Vermilion Flycatcher. ♂ ad. April 29, 1884. Fort
Verde, Arizona. 151 X 267.

- ✓ 2807. *Sialia mexicana*, Swains. Californian Bluebird. ♂ ad.
April 29, 1884. Fort Verde, Arizona.
176; 330; 108; 74; bill, measured from nostril, 8.7;
gape, 18; tarsus, 20.2; middle toe and claw, 20;
claw, 5.4.
- ✓ 2808. *Lanius ludovicianus excubitorides* (Sw.) Coes. White-rumped Shrike. ♂ ad. April 29, 1884. Fort Verde, Arizona. 232; 335; 102; 108; cul., 17; gape, 23.5; tarsus, 27.5; middle toe and claw, 26; claw, 8.
- ✓ 2809. *Lanius ludovicianus excubitorides* (Sw.) Coes. ♂ ad.
April 29, 1884. Fort Verde, Arizona.
223; 322; 98.5; 102; culmen 17.5; gape, 26;
tarsus, 28; middle toe and claw, 25; claw, 7.
2810. *Mimus polyglottus* (Linn.) Boie. Mockingbird.
♂ ad., April 29, 1884. Fort Verde, Arizona.
269; 380; 119; 127; bill, measured from nostril, 14;
gape, 27; tarsus, 35.5; middle toe and claw, 32;
claw, 8.
- ✓ 2811. *Tringunculus sparverius* (Linn.) Vieill. Sparrow Hawk.
♀ ad. April 29, 1884. Fort Verde, Arizona.
280; 600; 192; 135; culmen, including cere, 16; cere,
4.2; culmen, 13; tarsus, 38.5; middle toe and claw,
31; claw, 9.
- ✓ 2812. *Tringunculus sparverius* (Linn.) Vieill. ♀ ad.
April 29, 1884, Fort Verde, Arizona.
285; 630; 209; 140; culmen, including cere, 15.5;
cere, 4; culmen, 13; tarsus, 36.5; middle toe and
claw 32; claw, 10.
2813. *Trochilus platycercus*.
Hummingbird. ♀ ad. May 1, 1884. Fort Verde, Arizona.
103; 130; 50; 33; culmen from feathers, 18;
gape, 23; tarsus, 3.6; middle toe and claw, 6; claw
3. Bill, black. Legs, feet and claws, blackish. Spotted on
throat.
2814. Hummingbird. ♀ ad. May 1, 1884. Fort Verde, Arizona.
102; 120; ~~40~~ 46; 29; culmen from feathers,
22; gape, 26; tarsus, 4.3; middle toe and claw, 6.6;
claw, 3. Throat unspotted.

- ✓ 2815. *Zenaidura macroura* (Imml.) Baird. Summer Yellow
Bird. ♀ ad. May 1, 1884. Fort Verde, Arizona.
127; 192; 61; 49; bill, measured from nostril, 8
gape, 13.7; tarsus, 19; middle toe and claw 15;
claw, 4.2.
- ✓ 2816. *Icterus parisorum*, Bonap. Scott's Oriole. ♂ ad.
May 1, 1884. Fort Verde, Arizona.
217; 332; 102; 94; culmen, 21.5; gape, 24;
tarsus, 25; middle toe and claw, 25; claw, 7.5.
- ✓ 2817. *Icterus cucullatus*, Swains. Hooded Oriole. ♂ ad.
May 1st 1884. Fort Verde, Arizona.
210; 285; 87; 96; culmen, 18; gape, 21; tarsus
24; middle toe and claw, twenty-two⁽²²⁾; claw, 6.
- ✓ 2818. *Icterus bullocki* (Sw.) Wp. May 1st 1884. Fort Verde, Arizona.
♀ ad. 197; 305; 98; 86; cul., 18; gape, 20; tarsus
24.5; middle toe and claw, 22.5; claw, 6.5.
- ✓ 2819. *Lanius ludovicianus excubitorides* (Sw.) Coes.
White-rumped Shrike. ♂ ad. May 1, 1884. Fort
Verde, Arizona. 233; 327; 98; 104; culmen
18.5; gape, 26; tarsus 27; middle toe and
claw, 25; claw 8.
2820. *Accipiter fuscus* (Sw.) Bd. Sharp-shinned Hawk.
♀ ad. May 1, 1884. Fort Verde, Arizona.
155; 675; 210; 180; culmen, including cere, 20;
cere, 8; culmen from cere, 13; gape, 22; tarsus,
59; middle toe and claw, 47; claw, 12. Irides, red.
Cere, greenish-yellow. Bill, blue-black, with tooth
of maxilla & greatest convexity of mandible,
whitish horn-color. Legs and feet, greenish-
yellow; claws, black. Was flying with a Mocking-
bird in its claws when shot. Stomach empty.
2821. *Tyrannus verticalis*.
♀ ad. May 1, 1884. Fort Verde, Arizona. 230; 415;
127; 96; bill, measured from nostril, 14; gape, 26;
tarsus, 21; middle toe and claw, 22; claw, 7. Found
in a dying condition, and shortly afterwards died
in a spasm. It was emaciated to an extreme
degree. The bones were hard and brittle.
It probably died of senility, as it was in beautiful
plumage, and no other cause of death could be ascribed.

- ✓2822. *Tinnunculus sparverius* (Linn.) Vieill. Sparrow Hawk. ♂ ad. May 1, 1884. Fort Verde, Arizona. 262; 583; 187; 125; culmen and cere, 16; cere, 4; culmen, 12.5; gape, 19; tarsus, 38.5; middle toe and claw, 32; claw, 9.
- ✓2823. *Oxyechus vociferus* (Linn.) Reich. Killdeer. ♂ ad. May 1, 1884. Fort Verde, Arizona. 234; 514; 168; 97; culmen, 21.5; gape, 23; tarsus, 34; middle toe and claw, 25; claw, 6; bare part of tibia, 18.
- ✓2824. *Stelgidopteryx serripennis* (Aud.) Baird. Rough-winged Swallow. ♂ ad. May 2, 1884. Ft. Verde, Arizona. 135; 289; 100; 52; bill, measured from nostril, 5.5; gape, 15; tarsus, 11; middle ^{toe + claw}, 14; claw, 4.8. Iris, hazel. Bill, feet and claws, black.
2825. *Accipiter cooperi*, Bonap. Cooper's Hawk. ♂ juv. May 2, 1884. Ft. Verde, Arizona. 480; 855; 260; 240; culmen and cere, 27; cere, 11; culmen, 17; gape, 28; tars., 69; middle toe + claw, 59; claw, 15. Irides, yellow. Cere, greenish. Bill, pale bluish at base, shading into black at tip. Tarsi and toes, greenish-yellow; claws, black. Stomach empty.
- ✓2826. *Dendroica aestiva* (Gmel.) Baird. Summer Yellow Bird. ♀ ad. May 2, 1884. Fort Verde, Arizona. 125; 189; 61; 56; bill, measured from nostril, 8; gape, 14; tarsus, 17; middle toe and claw, 14; claw, 4.
- ✓*2827. *Chondestes grammacus*. Lark Finch. ♂ ad. May 2, 1884. Fort Verde, Arizona. 180; 285; 91; 78; culmen, 12; gape, 14; tarsus, 22; middle toe and claw, 21; claw, 5.5. (*Shot by E. W. M.)
- ✓2828. *Chondestes grammacus*. Lark Finch. ♂ ad. May 2, 1884. Fort Verde, Arizona. 182; 300; 95; 79; culmen, 13.5; gape, 14; tarsus, 21.5; middle toe and claw, 22; claw, 6.
- ✓2829. *Picus scalaris*, Wagl. Texas Sapsucker. ♂ ad. May 2, 1884. Fort Verde, Arizona. 187; 334; 104; 70; culmen, 20.5; gape, 22.5; tarsus, 19; middle toe and claw, 20; claw, 8.
- ✓2830. *Harporhynchus crissalis*, Henry. Red-vented Thrasher. ♂ ad. May 2, 1884. Fort Verde, Arizona.

- 300; 327; 99; 143; culmen, 38; from nostril, 30; gape, 42; tarsus, 36; middle toe and claw, 32; claw, 8.
- ✓2831. *Harporhynchus crissalis*, Henry. Red-vented Thrasher. ♂ ad. May 2, 1884. Fort Verde, Arizona. 297; 311; 92; 134; culmen, 38; from nostril, 30; gape, 41; tarsus, 34; middle toe and claw, 30; claw, 8.
- ✓2832. *Oxyechus vociferus* (Linn.) Reich. Killdeer. ♂ ad. May 2, 1884. Fort Verde, Arizona. 260; 522; 163; 116; culmen, 12; gape, 23; tarsus, 34; middle toe and claw, 26.5; claw, 6; bare part of tibia, 20.
- ✓2833. *Tinnunculus sparverius* (Linn.) Vieill. Sparrow Hawk. ♂ ad. May 2, 1884. Fort Verde, Arizona. 270; 605; 188; 133; culmen and cere, 15; cere, 4; culmen, 12; gape, 18; tarsus, 35; middle toe and claw, 32; claw, 9.
- ✓2834. *Tinnunculus sparverius* (Linn.) Vieill. ♂ ad. May 2, 1884. Fort Verde, Arizona. 275; 585; 194; 142; culmen and cere, 18.5; cere, 5; culmen, 12; gape, 17; tarsus, 37; middle toe and claw, 32; claw, 10. This specimen and the above were a mated pair, and were looking for a nesting place among some old trees.
- ✓2835. *Tinnunculus sparverius* (Linn.) Vieill. ♂ ad. May 2, 1884. Fort Verde, Arizona. 265; 580; 188; 125; culmen and cere, 15; cere, 4; culmen, 12.5; gape, 18; tarsus, 35; middle toe and claw, 33; claw, 10. Contained an egg in its oviduct which was nearly ready for extension.
- ✓2836. *Lophortyx gambeli*, Nutt. Gambel's Quail. ♀ ad. May 2, 1884. Ft. Verde, Arizona. 280; 375; 112; 100; culmen, 11; gape, 13.5; tarsus, 34.5; middle toe and claw, 36.5; claw, 9.5.
- ✓2837. *Pipilo chlorurus* (Towns.) Baird. Green-tailed Towhee. ♂ ad. May 5, 1884. Fort Verde, Arizona. 179; 245; 74; 81; culmen, 13; gape, 13.5; tarsus, 25; middle toe and claw, 23.5; claw, 8.5. Irides, reddish-brown. Bill, with maxilla black, mandible pale blue, slightly tipped with black. Legs, pale grayish-brown. Feet and claws, dusky grayish.

- ✓ 2838. *Astragalinus psaltria*
Goldfinch. ♂ ad. May 5, 1884. Fort Verde, Arizona.
113; 206; 65; 48; culmen, 9.3; gape, 9; tarsus, 13;
middle toe and claw, 14; claw, 4.7. Irides, hazel.
Bill, yellowish-olive, tipped with black on both
mandibles. ~~Feet~~ feet, brown. Tarsi and toes, brown;
claws, dusky brown. Under surface of feet, flesh-color.
- ✓ 2839. *Vireo bellii pusillus*.
♂ ad. May 5, 1884. Fort Verde, Arizona.
123; 181; 53; 53; bill, measured from nostril, 6;
gape, 14; tarsus, 20; middle toe and claw, 15; claw,
4. Iris, dark brown. Bill, with maxilla olive-brown;
mandible, bluish, tipped with white. Legs and feet,
bluish-gray; claws, dusky. Sang a loud, pretty song.
- ✓ 2840. *Peterus bullocki* (Linn.) Bp. Bullock's Oriole. ♂ ad.
May 5, 1884. Fort Verde, Arizona.
198; 312; 100; 83; culmen, 18; gape, 20.5; tarsus,
24.5; middle toe and claw, 22.5; claw, 7. Iris, dark
hazel. Bill, with maxilla blue-black; mandible, blue.
Legs and feet, bluish-gray. Claws, dusky.
- ✓ 2841. *Dendroica nigrescens* (Townsend) Baird.
Black-throated Gray Warbler. ♂ ad. May 5, 1884. Fort
Verde, Arizona. 130; 199; 65; 56; bill, measured
from nostril, 7.5; gape, 13; tarsus, 17.5; middle
toe and claw, 13.5; claw, 4. Iris, hazel. Bill, black.
Legs and feet, black, the latter yellowish below.
- ✓ 2842. *Geothlypis trichas* (Linn.) Caban. Maryland
Yellow-Throat. ♂ ad. May 5, 1884. Ft. Verde, Arizona.
133; 182; 55; 56; bill, measured from nostril,
8.5; gape, 15; tarsus, 20; middle toe and claw, 18;
claw, 5. Bill, blackish. Legs and feet, brownish-
flesh-color. Claws, pale brown. Irides, hazel.
- ✓ 2843. *Lanius solitarius* (Vieill.) Baird. Blue-headed Vireo.
Vireo. ♂ ad. May 5, 1884. Fort Verde, Arizona.
143; 236; 74; 58; bill, measured from nostril, 7.8;
gape, 16; tarsus, 21.5; middle toe and claw, 16.5;
claw, 5. Irides, hazel. Bill, blue-black. Legs,
feet and claws, bluish-gray.

- ✓ 2844. *Melospiza fasciata* Lallax
Song Sparrow. ♂ ad. May 5, 1884. Fort Verde, Arizona.
162; 222; 68; 75; culmen, 13; gape, 13.5; tarsus,
23.5; middle toe and claw, 21; claw, 6. Iris, hazel.
Bill with maxilla brownish-black; mandible, bluish.
Legs, feet and claws, brown, the tarsi (as is usual)
being lighter than the feet.
- ✓ 2845. *Peteria virens longicauda* (Lawr.) Coues. Long-tailed
Chat. ♂ ad. May 5, 1884. Fort Verde, Arizona.
190; 241; 76; 86; culmen, 14.8; nostril, 10.5; gape,
18; tarsus, 27; middle toe and claw, 21.4; claw, 6.
Irides, hazel. Bill, blue-black. Legs, feet and claws,
bluish-gray, or flesh-color. Notes exactly like the
Eastern Chat.
- ✓ 2846. *Peteria virens longicauda* (Lawr.) Coues. Long-tailed
Chat. ♂ ad. May 5, 1884. Fort Verde, Arizona.
197; 258; 82; 91; culmen, 15; bill, measured from
nostril, 10.5; gape, 19; tarsus, 28; middle toe and
claw 23; claw, 6. Colors of soft parts the same as No. 2845.
- ✓ 2847. *Dendroica audubonii* (Townsend) Baird. Audubon's
Warbler. ♂ ad. May 5, 1884. Fort Verde, Arizona.
148; 239; 77; 62; bill, measured from nostril, 5;
gape, 15; tarsus, 19.5; middle toe and claw, 17;
claw, 5. Irides, hazel. Bill, feet and claws, black.
2848. *Myiarchus cinerascens* Lawr.
♂ ad. May 5, 1884. Fort Verde, Arizona.
218; 325; 101; 99; bill, measured from nostril, 16;
gape, 26.5; tarsus, 23; middle toe and claw, 19;
claw, 7. Bill, black. Legs, feet and claws, bluish-black.
Iris, hazel.
- ~~2849~~ *Cerupidonax* Not skinned!
♂ ad. May 5, 1884. Fort Verde, Arizona.
151; 238; 71; 62; bill, measured from nostril, 9.6;
gape, 18; tarsus, 19; middle toe and claw, 14; claw,
4.5. Irides, hazel. Bill, with maxilla brownish-
black; mandible, yellow. Legs, feet and claws, black.
- * 2849. *Zenaidura carolinensis* (Linn.) Bp. Mourning Dove.
✓ * 2849 ♀ ad. May 5, 1884. Fort Verde, Arizona. (* This & the following
were a mated pair, killed at one shot by Mrs. Ellen W. McLean.)

- 280; 435; 143; 127; Culmen, 13; gape, 20; tarsus, 20; middle toe and claw, 24; claw, 6.
- ✓2850. *Zenaidura carolinensis* (Linn.) Bp. Mourning Dove. ♂ ad. May 5, 1884. Ft. Verde, Arizona (*Shot by E.W. M.). 298; 470; 150; 135; culmen, 13; gape, 20; tarsus, 21; middle toe and claw, 26; claw, 6.
- ✓2851. *Stelgidopteryx serripennis* (Aud.) Bp. Rough-winged Swallow. ♂ ad. May 5, 1884. Fort Verde, Arizona. 141; 312; 112; 55; bill, measured from nostril, 5; gape, 13; tarsus, 11; middle toe and claw, 15; claw, 5.
- ✓2852. *Sayornis nigricans* (Swains.) Bp. Black Pewee. ad. May 6, 1884. Fort Verde, Arizona. 185; 284; 85; 80; bill, measured from nostril, 11; gape, 20; tarsus, 19; middle toe and claw, 15.5; claw, 5.
- ✓2853. *Icteria virens longicauda* (Laur.) Coues. Long-tailed Chat. ♂ ad. May 6, 1884. Fort Verde, Arizona. 193; 255; 79; 88; culmen, 15.4; from nostril, 11.3; gape, 20; tarsus, 27; middle toe and claw, 22; claw, 6.
- ✓2854. *Geothlypis trichas* (Linn.) Caban. Maryland Yellowthroat. ♂ ad. May 6, 1884. Fort Verde, Arizona. 138; 187; 58; 60; bill, measured from nostril, 8; gape, 14; tarsus, 21; middle toe and claw, 18; claw, 5.
- ✓2855. *Tringoides macularius* (Linn.) Gray. Spotted Sandpiper. ♀ ad. May 9, 1884. Granite Creek at Whipple Barracks, Arizona. 191; 335; 101; 52; cul, 22; gape, 20; tarsus, 22; middle toe and claw, 23.5; claw, 7. Iris, hazel. Tarsus, 10.
- ✓2856. *Zamelodia melanocephala* (Swainson) Coues. Black-headed Grosbeak. ♂ ad. May 9, 1884. Whipple Barracks, Arizona. 205; 322; 100; 83; culmen, 19; gape, 21.5; tarsus, 24; middle toe and claw, 24.5; claw alone, 7. Singing a clear, sweet song when captured.
- ✓2857. *Icterus parisorum*, Bonap. Scott's Oriole. ♀ ad. Point of Rocks near (4 miles from) Whipple Barracks, Arizona. May 10, 1884. 214; 310; 98; 98 (also); culmen, 22; gape, 23; tarsus, 23.5; middle toe and claw, 24; claw, 7. Shot in a pine-tree.

- ✓2858. *Zamelodia melanocephala* (Swains.) Coues. ♂ ad. May 10, 1884. Point of Rocks, four miles from Whipple Barracks, Arizona. 210; 325; 99; 85; culmen, 17; gape, 21; tarsus, 24; middle toe and claw, 24.5; claw, 7.
- ✓2859. *Zamelodia melanocephala* (Swains.) Coues. ♀ ad. May 10, 1884. Point of Rocks, four miles from Whipple Barracks, Arizona. 206; 305; 100; 82; culmen, 19; gape, 20; tarsus, 23; middle toe and claw, 24; claw, 5.
- ✓2860. *Zamelodia melanocephala* (Swains.) Coues. ♂ ad. May 10, 1884. 205; 325; 100; 81; culmen, 20; gape, 20; tarsus, 25; middle toe and claw, 25; claw, 8.8. Point of Rock near Whipple Barracks, Ariz.
- ✓2861. *Phainopepla nitens* (Sw.) Sel. Black-crested Flycatcher. ♂ ad. May 12, 1884. Fort Mojave, Arizona. 208; 302; 92; 102; culmen, 12.3; bill, measured from nostril, 8.5; gape, 17; tarsus, 19.5; middle toe and claw, 20.3; claw, 6. Iris, red. Bill, legs, feet, and claws, black.
- ✓2862. *Pipilo aberti*, Baird. Abert's Towhee. ♂ ad. May 12, 1884. Fort Mojave, Arizona, on the Colorado River. 228; 289; 87; 112; culmen, 16.5; gape, 17; tarsus, 29; middle toe and claw, 28; claw, 9.
- ✓2863. *Guiraca caerulea* (Linn.) Swains. Blue Grosbeak. ♂ ad. May 13, 1884. Fort Mojave, Colorado River, Arizona. 184; 290; 91; 78; culmen, 16; gape, 17; tarsus, 20; middle toe and claw, 25; claw, 7. Iris, hazel. Bill, with maxilla blackish, mandible bluish horn-color. Legs, feet and claws, very dark brown.
- ✓2864. *Guiraca caerulea* (Linn.) Sw. Blue Grosbeak. ♂ ad. May 13, 1884. Fort Mojave, on the Colorado River, Arizona. 286. *Icterus bullocki*. 180; 280; 89; 76; culmen, 16; gape, 16.5; tarsus, 21; middle toe and claw, 24; claw, 6.5. Colors of soft parts like No. 2864.
- ✓2865. *Icterus bullocki* (Swains.) Bp. Bullock's Oriole. ♂ ad. May 13, 1884. Fort Mojave, on the Colorado River, Arizona. 205; 313; 103; 88; culmen, 18; gape, 20; tarsus, 24; middle toe and claw, 22; claw, 7.

2866. *Chordeiles acutirostris texensis*
Nighthawk. ♂ ad. May 13, 1884. Fort Mojave, Arizona.
222; 543; 181; 115; culmen, 7.5; bill, measured
from nostril, 5; gape, 2.5; tarsus, 14; middle
toe and claw, 19; claw, 5.
2867. *Auriparus flaviceps* (Sunder.) Baird. Yellow-headed
Tit. ♂ ad. May 13, 1884. Fort Mojave, Colorado Riv., Arizona.
117; 172; 53; 52; bill, measured from nostril, 7.5;
culmen, 9; gape, 10; tarsus, 15; middle toe and claw, 12;
claw, 4.
2868. *Auriparus flaviceps* (Sunder.) Baird. ♂ ad. May 13, 1884.
Fort Mojave, on the Colorado River, Arizona.
113; 167; 50; 50; bill, measured from nostril, 7;
culmen, 9; gape, 9.5; tarsus, 16; middle toe and
claw, 13; claw, 4.5.
- ✓ 2869. *Phainopepla nitens* (Sw.) Sel. Black-crested Fly-
catcher. ♂ juv. May 13, 1884. Fort Mojave, Arizona.
195 x 297. Young of the year attended by its parents.
2870. *Molothrus ater obscurus* (Linn.) Coues. Dwarf
Cowbird. ♂ ad. May 13, 1884. Fort Mojave, Arizona.
200; 334; 108; 83; culmen, 16.5; gape, 16;
tarsus, 24.5; middle toe and claw, 27; claw, 7.5.
Iris, hazel. Bill, legs, feet and claws, black.
- ✓ 2871. *Icteria virens longicauda* (Laur.) Coues. Long-tailed
Chat. ♂ ad. May 13, 1884. Fort Mojave, Arizona.
190; 250; 77; 87; culmen, 14; bill from nostril, 10;
gape, 18; tarsus, 27; middle toe and claw, 21; claw, 6.
- ✓ 2872. *Zamelodia melanocephala* (Sw.) Coues. Black-headed
 Grosbeak. ♂ ad. May 14, 1884. Peach Springs Cañon,
near Diamond Creek, at the Grand Cañon of the Colorado.
217; 327; 102; 86; culmen, 18; gape, 18.5; tarsus, 24;
middle toe and claw, 24.5; claw, 7.
- ✓ 2873. *Passerina amoena* (Say) Gray. Lazuli Bunting. ♂ ad.
Grand Cañon of the Colorado, Arizona. May 15, 1884.
151; 235; 73; 64; culmen, 11; gape, 12; tarsus, 17;
middle toe and claw, 19; claw, 6. Singing sweetly when taken.
- ✓ 2874. *Helminthophaga virginiae*, Baird. Virginia's
Warbler. ♂ ad. May 15, 1884. Grand Cañon of the Colorado, Arizona.
123; 197; 62; 49; bill, measured from nostril, 7;

- gape, 12; tarsus, 17; middle toe and claw, 14; claw, 4.
- ✓ 2875. *Spingoides macularius* (Linn.) Gray. Spotted Sand-
piper. ♂ ad. May 15, 1884. Grand Cañon of the Colorado
at the mouth of Diamond Creek. 195; 335; 103; 58;
culmen, 23; gape, 25; tarsus, 23; middle toe and claw,
23; claw, 4; bare part of tibia, 10.
- ✓ 2876. *Pipilo chlorurus* (Linn.) Baird. Green-tailed Towhee.
♂ ad. May 15, 1884. Peach Springs Cañon, near the
Grand Cañon of the Colorado, Arizona. Was singing
a loud sweet song. 187; 253; 77; 86; culmen, 12.3;
gape, 14; tarsus, 25; middle toe and claw, 24; claw, 8.
2877. *Myiarchus cinerascens* Laur. Flycatcher. ♂ ad. May 15, 1884. Diamond Creek, at
the Grand Cañon of the Colorado, Arizona.
217; 323; 98; 99; bill, measured ^{from nostril}, 14; gape, 24;
tarsus, 24; middle toe and claw, 18.5; claw, 6.5.
2878. *Amphispiza bilineata* (Less.) Coues. Black-throated
Sparrow. ♂ ad. May 15, 1884. Shot on a high bench
or mesa overlooking a long stretch of the Colorado
River at the Grand Cañon to the north of Diamond
Creek. 145; 213; 65; 66; culmen, 12; gape, 12;
tarsus, 20; middle toe and claw, 17; claw, 4.5.
- No. 98. *Spermophilus grammurus grammurus* Coues.
May 9, 1884. Wapiti Barracks, Arizona Territory.
New to age, 23; ear, 5; occiput, 28; nostril, 3.5;
culmen to end of ear, 72; stretch between
fore claws, 24.3. Fore arm, 42; fore foot, 39; hind
claw 9. Leg, 68. Hind foot, 53; claw 8. Tail
to end of hairs, 280; vertebrae, 220. Ear, height
23 above skull; greatest breadth, 19.

Bufo alvarius Girard. — I caught one
of these huge green Toads on the bank of
the Colorado River in a patch of Arrow-
-wood (*Tessara borealis*), on May 13, 1884.
It was carried to Peach Springs, Arizona,
and put in charge of the hotel keeper,
who allowed it to escape while I was
visiting the Grand Cañon.

List of Works Collated in the Appen-
dix () to my Birds of the Hudson Highlands.

- (1.) 1785. Pennant, J. Arctic Zoology.
- (2) 1792. Bartram, W. Travels Through North & South Caro-
lina, Georgia, East & West Florida, etc. etc.
Quoted from this, the 1st London edition.
- (3) 1799. Barton, B. S. Fragments of Natural History
of Pennsylvania, etc., etc.
- (4) 1807. Vieillot, L. P. Histoire Naturelle des Oiseaux de
L'Amerique Septentrionale.
- (5) 1808-14. Wilson, Alexander. American Ornithology.
- (6) 1809. Williams, S. Natural and Civil History of Vermont.
- (7) 1825-33 Bonaparte, C. L. American Ornithology, etc.
- (8) 1838. Bonaparte, C. L. The Genera of North American
Birds and Synopsis of the Species found within
the territory of the United States, systemati-
cally arranged in Orders and Families.
- (9.) 1831-39 Audubon, J. J. Ornithological Biography.
- (10) 1832-34 Nuttall, J. A Manual of the Ornithology
of the United States and of Canada.
- (11) 1833. Emisson, E. A Catalogue of the Animals
and Plants of Massachusetts.
- (12) 1839. Audubon, J. J. A Synopsis of the Birds of
North America.
- (13) 1840 Mittell, J. A Manual of the Ornithology
- (14) 1843. Finsley, J. H. A Catalogue of the Birds of Con-
necticut, arranged according to their natural families.
- (15) 1844. Baird, W. M. & L. F. List of Birds found in the
vicinity of Carlisle, Leominster and County, Penn., etc.
- (16) 1844. De Kay, J. E. Zoology of New York, or the
New York Fauna; etc.
- (17) 1844. Grandid, J. P. The Birds of Long Island.
- (18) 18 - . Proc. Boston Soc. Nat. Hist. [I did not
collate the entire series.]

- (19) 1857. Keesley, J. Geology of Cape May County.
- (20) 1858. Saunders, Cassin & Lawrence. U.S. Pa. R. Survey.
- (21) 1859. Jones, J. M. Wedderburn, J. W., and Hurd, J. L.
The Naturalist in Bermuda.
- (22) 1860 Jackson, R. M. S. The Mountain.
- (23) 1864 Allen, J. A. Catalogue of the Birds found
at Springfield, Mass., etc. < Proc. Essex Inst. IV,
1864, pp. 48-78.
- (24) 18 - . Proceedings of Essex Inst. I think
have collated everything in it.
- (25) 1864-66. Baird, L. F. Review of American Birds, etc.
- (26) 18 - to . Annals of the Lyceum of Nat. Hist., N.Y.
I think I have collated everything.
- (27) 1866. Lawrence, J. N. Catalogue of Birds etc.
on New York, Long, and Staten Islands and
the adjacent parts of New Jersey. < Ann. L. N. H., N.Y.
- (28) 1875. Samuels, E. A. Ornithology and Ecology of
New England.
- (29) 1868. Abbott, C. C. Catalogue of Vertebrate Animals
of New Jersey < Cook's Geology of New Jersey.
- (30) 1868. Coues, E. List of Birds of New Eng. < Proc. Essex Inst.
- (31) 1869. Turnbull, W. P. Bds. E. Pa. & N. J. Original ed.
- (32) 18 to . American Naturalist. collated to 1880.
- (33) 1869-70. Allen, J. A. Rarer Bds. Mass. < Ann. Nat.
- (34) 1872. Coues, E. Key to North American Birds.
- (35) 1872-7 Maynard, C. J. Bds. E. N. Am.
- (36) 18 to Forest and Stream. First 16 volumes.
- (37) 1874 Baird, Brewer & Ridgway, N. A. B.
- (38) 1874 Coues, E. Bds. N. W.
- (39) 18 to Field and Forest.
- (40) 1878. Jordan, D. S. Manual Vertebrates. 2nd ed.
- (41) 1876-77. Zentry, J. H. Life-Histories Bds. E. Pa.
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P. Kalm. Travels into North America
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 1772 2nd Eng. Ed.

Notes on Fishes: -

"Largest specimen of Long-headed Sucker. - Lat. l. 62.
 12 scales in cross series.

10 " l. l. to ventral.

D. 11; P. 15; V. 9; A. 7.

^{Sided}
 "Black-headed Sucker. - Lat. l. 77.
 8 scales above l. l. 12 scales below l. l. (to border of ventral).
 D. 11; P. 15; V. 9; A. 7.

"Catostomus sphyro. Lat. l. 76. Between l. l. and
 ventral, 14. Between dorsal and l. l. 13. Peritoneum black.
 D. 15; P. 16; V. 9 (or 10?); A. 7 (or 8?).

Upper lip with 3 rows of large papillae; lower lip
 incised to the base, with about 8 rows of papillae.

Beneath, orange-yellow; above, dark olive-brown,
 with a strong pinkish tinge below the lateral
 line; each scale banded with silvery at tip.

Scales in longitudinal series the next above lateral
 line, 73. Length, 360 mm, exclusive of caudal
 fin, which measures 70 mm. Height of dorsal
 anteriorly, 55; posteriorly, 28; its length, 75.

Length of pectoral, 66. Length of ventral, 49.

Length of anal, 63. Length of head, 102 mm.

From tip of snout to eye, 48. Width of eye, 8.5.

From ^{posterior} ~~anterior~~ border of eye to opercle, 51.

Width of mouth, 25; length of mouth, 25.

"Sharp
~~Black~~-nosed, Long-headed Sucker. - Lat. l. 64.
 Scales in the longitudinal series next above the
 lateral line, 60. Rows of scales between the
 lateral line and dorsal fin, 8; between the l. l.

and ventral, 10. D. 11; P. 15; V. 9; A. 7.

Upper lip with about 8 rows of papillae; lower lip with
 about 10 rows of papillae. Length 360 mm exclu-
 = sive of caudal, which measures, 65. Caudal
 fork, 24. Length of head 97. Tip of snout to eye, 46.
 Orbit, 15. Eye, 11. From posterior border of eye to
 to opercle, 43. Depth of body, 77.

"Black-sided Short-headed Sucker. - Length of head, 64.
 Tip of snout to eye, 38. Length of eye, 18. Eye to
 end of opercle, 26. Height of body, 60. Length, 270
 exclusive of caudal, which measures 53 mm. Fork
 of tail, 13. Scales of l. l. 73. Scales in series above l. l.
~~71~~ 71. Scales in series above dorsal, 73 (don't know what
 I meant by this. Ella wrote it). Peritoneum, black.
 Scales between dorsal and l. l. 7; bet. l. l. and ventral, 11.
 D. 11; P. 15; V. 9; A. 7.

Upper lip with 3 rows of papillae. Lower lip with
 about 8 rows of papillae, and not incised.

^{Length of head, 50.}
 "Big-headed Sucker. - Length, 200. Tail, 40.
 D. 11; P. 15; V. 9; A. 7. Scales in l. l. 66.
 In long. series above l. l. 60. Between dorsal and l. l. 9.
 Bet. l. l. and ventral 11. ^{P. in another} Specimen, about same
 size, scales l. l. 62. above l. l. 58. Bet. Dorsal and
 l. l. 9; between l. l. and ventral, 11."

Verde Brook Trout ♀ full of large eggs. Length
 19 1/4 inches. Weight (guessed) 2 1/2 lbs. Birth just
 in front of dorsal fin 10 3/4 in. Length to base caudal
 17 1/8. Diameter of eye 7/16. Tip of lower jaw to
 end of opercle 4 1/4 in. Length of pectoral fin, 2 3/4.
 Length of dorsal, 2 1/8. Height of dorsal in front 2 1/2.
 Height of dorsal behind 1 7/16. Height of adipose, 1 3/16.
 (or perhaps 13/16?). Length of ventral fin, 2 1/4. Anal
 fin along anterior border, 2 5/8. Anal fin, depth on
 posterior border 7/8. Anal fin, length of base 1 3/4.
 Caudal slightly forked. Caudal and dorsal
 fins olivaceous-yellowish, and thickly spotted.

"Pectorals, ventrals and anal, orange-yellow, and only spotted along anterior border.

Sides of head below eyes old gold, unspotted, except an area just below and behind the eye, where the spots are perfectly round and black and rather sparse.

Ventral aspect yellowish and unspotted.

Sides, to half an inch above lateral line, silvery-grayish; spotting very sparse below, (the spots not extending to within an inch of lower fins) growing more numerous above (X-shaped, some round). Above dark olive. Some scales with metallic bluish tips.

Flesh, reddish-salmon. Peritoneum whitish or colorless. Scales l. l. 120. D. 12; V. 10; A. 12; P. about 16. ~~16~~"

"A small one, 13 inches total length, differs in color only, being whitish in pectoral region below."

"Another trout 18 1/2 inches total length. To Caudal, length 16 3/4. D. 12; V. 10; P. 16; A. 11."

The note-book in which the above notes on the Trout were entered ("Physician's Hand Book") is dated (printed date) "1887". There is no date with notes.

Xanthocephalus xanthocephalus. - Nearly every spring there appeared in the corrals at Fort Verde, two or three individuals of this species, that were conspicuous amongst their brethren by reason of their unusually rich orange-colored heads. I made special efforts to secure one of these rare specimens, but only wounded one so that it flew off and died.

Often, as I have watched them eagerly feeding upon the scattered barley in the corrals, running fearlessly about amongst the stamping feet of three score lively cavalry horses, I have been reminded of the little newsboys who run so fearlessly amongst the flying vehicles of our eastern metropolis.

Fort Verde, Arizona

409. Icteria virens longicauda ♂ ad. Parent of set 3 - No. 2986. 190; 244; 75; 85; nost., 10.4; cul., 15; gape, 19; tars., 26; Mtc., 21; cl., 6. Sex carefully determined - ♂.

410. Icteria virens longicauda ♂ ad. 2987. 200; 260; 80; 92; nost., 10; culmen, 14; gape, 18.5; tarsus, 27; mtc., 22; cl., 6.

411. Empidonax (sp. same as below) ♂ ad. 154; 229; 71; 66; nost., 10; gape, 18; tars., 17; mtc., 14.5; cl., 5.3. Iris raw number. Not skinned.

412. Empidonax pusillus (Sw.). ♂ ad. Parent of set 3. No. 2988. 155; 217; 67; 66; nost., 10; gape, 18.5; tars., 17; mtc., 14.3; cl., 5.

413. Empidonax pusillus (Sw.). ♀ ad. Parent of set 3. No. 2989. 149; 203; 66; 64; nost., 9.5; gape, 17.5; tars., 16; mtc., 13.5; cl., 5.

414. Mimus polyglottis ♂ ad. * Shot by E.W.M. in our garden. 2990. 270; 360; 110; 130; cul., nost., 11; cul., 19; gape, 26; tarsus, 32; mtc., 29. Cl., 8.

Notes. - Pandion haliaetus carolinensis. - One seen to-day.

Pipilo aberti. - Saw the first young on wing. It flew with ease across the Verde River. A nest containing four young a few days old, one containing two eggs, and a third containing a single fresh egg, were found.

Icteria virens longicauda. - A nest containing three eggs, probably a full set, was taken with the male parent (No. 409).

Vireo. - A nest containing one egg and that of a Cowbird was found, and the latter taken.

Empidonax. - A set of three eggs was taken with both parents.

Sayornis sayna. - A set of four eggs was taken on the porch of the post hospital.

June 10th, 1884 Ft. Verde, U.S.

✓ 415. *Lanius borealis*. ♀ ad. Parent of set 4, No. 2991. 177: 279: 85: 72: cul., 17: gape 18.5: tars., 22: mtc., 23.5: cl., 7. Iris dark hazel. Bill, with maxilla dusky olive-brown; horn-color at sides at base; whole of mandible, horn-color. Leg 2, feet and claws, brown.

✓ 416. *Helminthophaga luciae*. ♂ ad. This specimen was shot for identification. From its actions, I knew it had a nest or young in the vicinity. 109: 172: 55: 42: nost., 6.5: gape, 10: tarsus 17: mtc., 14: cl., 4. Irides, hazel. Bill, with maxilla blackish; mandible horn-color, bluish on sides. Legs and feet brownish plumbeous; claws, brownish black.

Lanius borealis - Found my first nest of the Blue Grosbeak. The male bird could not be found. The nest was placed in a willow sapling within a few yards of the Verde River in a thicket of small willows growing amongst some small ash-trees. The female at my approach dropped from the nest which was about six feet above the ground straight to the ground and then flew off with a chirp and whining sound, and, after eying me from a branch discontentedly for some time, approached quite close to the nest with hostile demonstration restlessly flitting from branch to branch of the willows and grape vines by which they were overgrown. The eggs were nearly ready to hatch. One of them measured 17 X 23 m.m.*

*The others measured 17.7 X 23, 17 X 23.5, 18 X 23. They were not preserved.

all were a pale blue in color. The nest I have preserved and shall attempt to extract the embryos by maceration.

Icteria virens longicauda. - The Chat's nest found yesterday a few yards from the Blue Grosbeak's above described still contained only three eggs & was as before zealously guarded by both parents. I took the nest - set of three eggs, but did not molest the old birds.

Sturnella carolinensis. - Took a set of fresh eggs. *Mimus polyglottus*. - Took a set of very darkly large spotted eggs. One of the five was broken while extracting the embryo. Nest built in a mesquite, 2 feet from the ground, near the engine house.

The parents never sit on their nests when the sun is shining, and seldom show any solicitude when their nests are being examined, unless calls of alarm or other artifices are resorted to, to attract them. They are very shy birds when resting.

Ardea herodias. - This species was seen to-day, and is doubtless breeding beside the Verde, where I have searched in vain for its nest.

June 11th, 1884. Ft. Verde, Ariz.

✓ 417. *Trochilus alexandri* hummingbird ♀ ad. Parent of two young in nest. 2993. 101: 121: 46: 31: cul., from feathers, 21: gape 25: tars., 5: mtc., 7: 3.

418. *Vireo pusillus* ♀ ad. 2994. 130: 180: 56: 54: nost., 7: gape 14: tars., 19: mtc., 14: cl., 5.

419. *Phainopepla nitens* ♀ ad. 2995. 209: 295: 92: 100: cul., 14: nost., 8.2: gape 18: tars., 19: mtc., 19: cl., 5.

420. *Phainopepla nitens* ♀ ad. 2996. 202: 292: 95: 93: cul., 12.5: nost. 8.5: gape 18: tars., 18: mtc., 20: cl., 7.

421. *Phainopepla nitens* ♂ ad. 2997. 205: 295: 92: 99: cul., 11.5: nost., 8: gape 17: tars., 19.5: mtc., 18.5: claw 5.

422. *Phainopepla nitens* ♂ ad. 2998. 200: 297: 90: 97: cul., 12: nost., 7.5: gape 17: tars., 19: mtc., 19: cl., 5.5

2999/423. *Coccyzus bilineatus*. ♂ juv. Young still with parent.

3000/424. *Helminthophaga luciae*. ♀ juv. Young still with parent.

3001/425. *Phainopepla nitens* ♂ ad. 200: 286: 88: 93: cul., 11: nost., 7: gape 16: tars., 18: mtc., 19: claw 5.

(June 11, 1884 - Continued.)

426. *Phainopepla nitens* ♂ ad.
 ✓ 3002. 209: 295: 93: 102: cul, 13: nost., 8: gape 18: tars., 18: Mte., 19: claw 6.
427. *Goniaphea cœmlea* ♀ ad.
 ✓ 3003. 185: 275: 83: 70: cul, 16: gape 17: tars., 21: Mte., 22: cl., 7.
428. *Myiarchus crinitus cinerescens* ♂ ad.
 3004. 225: 335: 102: 102: nost., 16: gape 29: tars., 24.5: Mte., 22: cl. 7.5. Iris, brown. Bill, brownish-black. Legs, feet and claws, plumbeous-black.
429. *Pyrrhula ludoviciana* ♂ ad.
 ✓ 3005. 189: 298:
430. *Pyrrhula ludoviciana* ♀ ad.
 ✓ 3006. 182: 286: 92: 73: cul, 16: nost., 11.5: gape 20: tars., 21: Mte., 20: claw 6.
431. Killdeer. ♀ ad.
 ✓ 3007. 254: 520: 160: 93: cul, 22: gape 24: tars., 36.5: Mte., 27: claw 6. tibia 20.
432. Hummingbird. ♂ juv.
 3008. Nestling of which No. 417 was the ♀ parent. Nest Preserved also
433. Hummingbird ♀ juv.
 3009. Nestling of which No. 417 was the ♀ parent.
- Notes. - A nest containing half-grown young of the Lazuli Finch *Spiza adumna* was found in a crotch of ~~an old~~ ^{some} ~~tree~~ ^{tree} ~~6 feet~~ ^{from} the ground. The female was very bold and came about with hostile demonstrations and a sharp note of anxiety and distress; but the male, who had been singing near the nest before its discovery, could not be seen although I tried to call it to the nest.
- Phainopepla nitens*. - This bird is evidently breeding here, as one of the females ^{bore} showed evidence of oviposition, while the other contained two good sized eggs, which would have been deposited in a day or two.
- Yellow-headed Titmouse. - The second nest which I found June 5th was deserted and my careful and extended search failed to discover any of the nests or birds. The species is found south of us, down the Valley, as I saw a nest which

(June 11, 1884 - Continued.)

was partly built a few days ago.

Black Hawk (*Urubitinga anthracina*). - The species was seen but could not be procured. They were worried by the pestering Arkansas Flycatcher.

Salpinctes obsoletus. - One was seen on the edge of a Beaver Creek, near the Verde.

Leucocorys californicus. - A nest was discovered in a ^{dense and large} haw bush about four feet from the ground. It was an old nest, doubtless of *Harporhynchus crysalis*, and contained was but little repaired. It had become matted and hardened by exposure during the winter and the cavity had sagged down to a mere groove at one side of the nest which had been beaten down to an oblique position. A few sticks had been placed around the edge of this nest to keep the eggs from rolling out. The egg was fresh, and measured X. It would have been left for a complete set, but the locality was such that I feared not being able to find the nest again. No birds were seen about the nest, but one was seen half a mile from it.

I have only seen one other here at Verde - the one I shot & preserved. My wife saw a pair down the Valley, and I also saw a single one at Fort Mojave.

Vireo. The young of this species are now on wing, led about by their parents, who manifest much anxiety for their safety, and frequently utter a call resembling the Catbirds (*M. carolinensis*).

Pooecya bilineata. - The young are flying in many cases but are still with their parents who exercise great care of them.

Melospiza melodia. - One or two pairs were seen along Beaver Creek. The species is only found where there is water, and is rather commonly seen along the secluded parts of the banks of the Verde, but I have been unable to discover its nest. I have seen no young as yet.

Chondestes grammacus. - Found a nest containing two young just out of the shell & one egg. Nest sunk ^{to} ~~in~~ ^{below} the ground under a spreading weed. Parent started from home a few feet.

June 13th, 1884. Ft. Verde, A.T.

Note on June 9th. I examined two nests of the Rough-winged Swallow (*Stelgidopteryx serripennis*), which contained young half grown. As I did not remove the young from the burrows I cannot say of what the nests were composed, though they appeared to be rather bulky, and composed of weed-stems: nor can I say how many young these nests contained. The burrows were about a foot deep and the entrances choked by sand (evidently so arranged in digging), as a protection from invading foes. The birds flew about me with loud ~~cries~~ cries, solicitous for their young ones safety.

No Barn Swallows have been seen for a week.
Coccyzus americanus. - First seen here May 30. The species is now rather common in suitable localities.

To-day (June 13th) I spent the afternoon in collecting eggs:

Two sets of Albert's Towhee (*Pipilo aberti*) were taken. Both were full sets, having been left several days after the last egg was laid, and none others were deposited. Each contained 3 eggs slightly incubated.

Set No. $\frac{13}{3}$. was placed in the fork of a cottonwood sapling four feet above the ground.

Set No. $\frac{14}{3}$ was placed in a bunch of small branches growing upon the trunk of a large cottonwood, seven feet above the ground.

A third nest was in a "sage" bush about $1\frac{1}{2}$ feet from the ground, and contained only two nearly fledged young, one of which (No.) was taken and preserved. One or two families of young were on wing with their parents, chiefly down among debris floated in heaps under the cottonwood-trees, on the banks of the Verde. I again noted the similarity of their ^{alarm} note to that of the Robin in autumn. The parent of the nests taken here so shy that they could not conveniently be secured.

Empidonax frontalis. - One set of six eggs was taken from a grape-vine wing, in a festoon between the lower boughs of a sycamore tree. Young birds were seen on wing carefully attended and fed by both parents.

Zenaidura macroura. - A set No. 2 was taken from a collection of sticks and roots collected in a festoon of grape-vine lodged there by high water. A very few small twigs, say 5 or 6, were apparently placed by the bird before depositing her eggs.

Vireo. The Vireo's nest which was found on June 9th containing one Vireo's & a Cowbird's egg was found deserted & the one egg & nest were secured.

Empidonax traillii pusillus. - This species breeds rather commonly in thickets of willow and cottonwoods along the Verde River. Several nests were taken as follows:

Set No. $\frac{13}{4}$. Nest built in a willow fork five feet from the ground.

Set No. $\frac{14}{4}$. Nest built in a ^{cottonwood sapling} ~~willow bush~~ at the fork six feet above the ground.

Set No. $\frac{15}{3}$. Nest built in a willow bush at the fork five feet from the ground.

Set No. $\frac{16}{3}$. Nest built in a forked branch of a cottonwood-tree twenty feet above the ground. This is the only instance in which I have seen a nest in a large tree.

Pooecetes gramineus. Set No. $\frac{17}{4}$. In a low bush ("green bell flower") just off the ground.

✓ 3010 434. *Helminthophaga luciae*. ♀ juv. Young with parent.

✓ 3011 435. *Phainopepla nitens*. ♂ ad. 210; 300; 93; 102; cul., 13; nost., 8.5; gape, 18; tars., 18; mte., 20; cl., 6. Stomach (gastrophagus) filled with "haw" berries.

✓ 3012 436. *Homophya corulea*. ♂ ad. 183; 288; 90; 73; cul., 17.5; gape, 18; tarsus, 26; mte., 22; cl., 7.

437. *Icteria virens longicauda* ♂ ad.
 3013. 212; 272; 77; 84; cul., 14.5; nost., 10; gape, 18;
 tarsus, 26; mte., 20; cl., 6.6.
 Notes (June 15th). - *Arremonops* *luciae*. - This
 is a common species but my efforts to
 discover where it builds its nest have been
 unavailing. Families of young birds accom-
 panied by their parents may be seen in
 any thicket or mesquite covered area.

- June 14th, 1884. Ft. Verde, Arizona.
 438. *Myiarchus cinerascens* ♂ ad.
 3014. 226; 330; 99; 99; nost., 14.5; gape, 26.2; tars., 23;
 mte., 18; cl., 7.

This species is quite numerous along the Verde; but,
 owing to the difficulty of climbing the large cotton-
 woods in the dead branches of which it builds
 its nest, I have failed to secure its eggs. The
 young birds are just beginning to fly.

Lanius ludovicianus excubitorides. - Although
 so abundant during the migration, this Shrike, at
 least here in the river bottom has become un-
 common. I found one pair to-day, but did
 not find the nest which their actions told me
 must be in the neighborhood. Will look again when
 more at leisure.

Sturnella magna neglecta. - A pair of these
 birds are without doubt nesting near the Verde
 River a little way above the post, but I did
 not discover the nest.

Red Flycatcher. - A female of this species
 flew from the lower branch of a Cottonwood
 tree near the Verde. I looked in the tree for its
 nest but did not find it. In passing the same
 tree returning later that afternoon, the bird
 flew from the branches of the same tree over my
 head. I ascended the tree and failed to
 discover its nest, although I secure the nest
 of *Leopodaeus frontalis* with 5 eggs, and saw
 a Goos's nest (*Zenaidura*) containing 2 incubated eggs.

The male bird was not seen, and the female
 was excessively shy, keeping a long way in
 advance, perching upon the lower dead branches
 of cottonwoods and dead bushes, flying out
 of sight if too closely followed.

Phainopepla nitens. - A male bird flew
 from a ^{isolated} cottonwood near the river, and I
 went to the tree hoping to discover its nest. When
 beneath the tree I gave a chirp, when the female
 flew from her nest and hovering about the tree
 in a ~~short~~ circle flew off to the top of the
 nearest cottonwood-trees by the river. The male
 hovered and fluttered over the tree while I
 was making the ascent, but both birds were
 perfectly silent. I found the nest to be
 very artless and careless structure saddled upon
 a horizontal fork of a ~~low~~ limb of the cotton-
 fifteen feet above the ground. It was small,
 flattened, and when removed showed a large
 hole on one side which had been occupied by one
 branch of the fork. The eggs were two in number,
 they and the nest are described in detail in my
 book containing "Descriptions of Nests + Eggs". When I had
 descended the tree I fired a shot at the male as
 he flew overhead but missed. I followed the pair
 from tree to tree until they alighted in the adjoining
 bushes, where I fired again at the pair, but owing
 to badly loaded cartridges, missed again, and then
 the birds disappeared, badly frightened, in some
 dense mesquite bushes a long way off, but
 afterwards returned to the tree where the nest
 had been. I tried to secure them again on my
 return but they had become shy as they
 habitually are, and I did not procure a shot.
Geothlypis cyanea. - A nest was
 found upon a horizontal bough of a
 large mesquite bush, where it made a
 conspicuous object, owing to its bulk and exposed
 position. It was well built and contained

two blue eggs, resembling those of a Robin. They seemed to me larger & much paler in color than the set of three which I found in a dense "sage" bush on June 3rd, and which was left until the 5th, when the eggs were found to be gone. I then said I would not again leave an incomplete suite of new eggs in hopes of getting a complete suite; but I left the two eggs, notwithstanding this resolve, which I had since carried out in the case of the Road-runner's nest which contained a single fresh egg.

Mimus polyglottus. - The first young Mockingbirds are now emerging from their nests in company with their parents. I found a nest to-day containing 3 eggs, and a set of four which I took, but broke all but one when sliding home, with them in my fish-basket. The latter nest was built in an open mesquite in plain view from a travelled road.

Catherpes mexicanus carolinensis. - This bird is still present, and doubtless breeds on the Verde. Saw one today. *Coccyzus americanus* was heard calling among the tall cottonwoods of the River.

439 3015 *Geothlypis trichas* June 15, 1884. Ft. Verde, A.T.
Eugenes fulgens. - Mr. Vogdes brought me this nest, with the parent which he shot beside the nest. The eggs measure, respectively, 13 x 9 and 13 x 9.5 mm. The nest measures in width externally 43, internally 25; in depth externally 37; internally 20. Eggs as usual pure white, incubation begun, so that only one egg was completely emptied of its contents. The other was filled with arsenic to preserve it.
♀ ad.

107; 124; 48; 32; bill from frontal feathers 20; gape, 25; tarsus, 5; mte., 7.5; cl. 3.3. Parent of the above nest and two eggs

Sceloporus

No. 2. *Sceloporus*. - June 15, 1884. Ft. Verde, Arizona. Ad.
Total length, 277; head, 33; nose to anus, 125; anus to end of tail, 152. Forearm, 19; fore foot inside claw, 23; longest claw, 4; Leg, 25; hind foot including claw of longest toe, 31; claw, 3.3. ♀ ad.
Shot in the top of a large bush.

June 16th, 1884. Fort Verde, A.T.

439a. *Pyrocephalus rubinus mexicanus* (Sch.) Coues.
✓ 3016. Vermilion Flycatcher. ♀ ad. Parent of Set No. 2-1.
Shot from her nest and two eggs, which were taken and preserved, save one egg broken in getting out of nest. I believe this is the first authentic nest and eggs ever taken of this rare Flycatcher.
152; 25.5; 82; 65; nost., 9.6; gape, 18.5; tarsus, 16.5; mte., 14; cl., 4. Iris, hazel. Bill, legs, feet and claws, brownish-black.

440. *Phainopepla nitens*. ♀ ad. Parent of Set No. 2.
✓ 3017. Shot in next tree to the one in which the nest was taken. The male was also present, but too shy for capture. 194; 287; 88; 89; cul., 11.5; nost., 8; gape, 18; tars., 19; mte., 19; cl., 6. Irides pale red, and bill & feet less black & more brown than in the male.
441. *Geothlypis trichas* ~~crissalis~~ *crissalis* ♀ ad. Parent of No. 3018.
Set 4, shot beside nest. 300; 313; 95; 133; cul., 38; nost., 30.5; gape, 41; tarsus, 32; mte., 31; cl., 9. Irides, brownish yellow. Bill, black; Legs & feet, plumbeous brownish-black; claws, blackish.

442. *Phainopepla nitens*. ♀ ad.
3019. 209; 297; 92; 100; cul., 13; nost., 8; gape, 18; tarsus, 18; mte., 19; cl., 5.5.

443. *Lanius ludovicianus excubitorides* ♀ ad.
✓ 3020. 225; 319; 97; 102; cul., 16; gape, 24; tarsus, 27.5; mte., 23.5; cl., 8. Irides, hazel. Bill, black, tinged with brown on lower mandible at base. Legs & feet, brownish-black. claws, blue-black.

444. *Lophortyx gambeli* ♂ ad. Ft. Verde, A.T.
✓ 3021. 250; 386; 114; 107; cul., 12; gape, 14; tars., 33; mte., 35; cl., 9.

June 16, 1884.

445. *Icterus bullocki*. ♂ ad.
 ✓ 3022. 196; 322; 104; 76; cul., 20; gape, 21.5; tars., 23; mte., 22.5; cl., 6. Black markings of tail rather obsolete.
- ✓ 446. *Vireo* ♂ ad.
 ✓ 3023. 130; 180; 55; 52; nost., 7; gape, 13.5; tars., 19; mte., 14; cl., 5.
447. *Sturnella neglecta* = ? juv. Well feathered
 ✓ 3024. and able to take care of itself as, indeed, it was doing. 230; 380; 109; 67; cul., 27; gape, 30.5; tars., 38; mte., 33; cl., 7. Irides, dark brown. Bill with maxilla dusky-brown; mandible, flesh-color slightly tipped with dusky. Tarsi, flesh-color; feet brownish-flesh-color; claws light reddish-brown. This specimen may be taken as a fair example of a well-developed first plumage.
448. *Geothlypis trichas* ♂ juv. Well-feathered
 ✓ 3025. and taking care of itself. 305; 327; 100; 154; cul., 30; nost., 22; gape, 35; tars., 35; mte., 30; cl., 8. Iris, brownish-white; Bill, black. Legs & feet dusky plumbeous; claws, brownish-black. The bill legs & feet are about the same colors as the adult. The plumage is fresh and soft, contrasting strongly with the worn and faded feathers of the old birds at this season. The only difference in plumage between the young ^{in first full plumage} and the adult, consists in the much darker, tail & brighter plumage generally of the young bird. The tail being blackish; but doubtless the old bird in new dress would present as bright an appearance. If any tangible differential characters can be ascribed to the young bird, they may be summed up by saying that the tail is darker, the colors generally ^{darker} brighter and ^{the} markings more sharply defined, while the red is ^{nearly} confined to the crissum instead of slightly tinging the posterior portion of the belly as is usual (?) in the adult. The sides are, in birds just out of the nest white-brown, gradually becoming paler, and finally assuming the yellowish color which never becomes bright yellow even in the adult. In birds just out of the nest, the bill is not quite

June 16, 1884.

- black, and the legs & feet are paler more greenish than in the adult. In the whole the young ~~the image of~~ this species are strikingly similar to the adult.
449. *Geothlypis trichas* ♀ juv. Young still
 ✓ 3026. with male parent. Length 215; cul., 21; gape, 28; tail 82. This is a young bird of the same pair who nest + 4 eggs I took to-day. The male bird accompanied the young, while the female divided her attention between the new nest & her first brood. The whole family remained about the new nest which I discovered on the 14th, when it contained two eggs.
450. *Geothlypis trichas* ♀ juv. just from nest,
 ✓ 3027. accompanied by both its parents.
451. *Lepus callosus texianus* ♀ juv. Young Jack Rabbit.
 Notes. — The Crimson Flycatcher (*Pyrocephalus rubinus mexicanus*) was again started from the same cottonwood tree in which it was found two days before. It was even more shy than before. I could not get any where near it, nor even walk towards but it would fly to a more distant perch. It alighted on low dry bushes and stumps near the cottonwoods, flying farther off at every attempt to approach it until soon lost sight of. Returning later to the tree it was again found and it eluded me again. I then sat down in the shadow at the foot of a large cottonwood within range of the tree supposed to contain the nest. I waited perhaps a third of an hour when the little bird flew to the tree and after hopping from branch to branch for a moment, sat upon her nest which was placed in the rather large dry fork of a low branch of the cottonwood at a height of about fifteen feet from the ground. I gave a chirp-which brought her from her nest to a dry twig near it, where I shot her. She then ascended and climbed out upon the long bough upon which the nest was placed.

momentarily expecting the branch would crack suddenly off and precipitate both myself & the eggs to the ground beneath.

I was barely able to touch the nest by reaching forward, and may perhaps be pardoned for dropping from the tips of my fingers the first egg of this beautiful flycatcher that a naturalist's hands ever touched. I dropped to the ground & was utterly demoralized, but it appeared, when in the nest to be precisely like the one preserved.

Lanius ludovicianus excubitorides. - A female flew from a thicket and was shot. Her body bore marks of recent parturition, but the nest was not in the thicket whence she flew and could not be discovered.

Later, a nest was found at a distance from this spot which was built on top of a ~~long~~ dense, dead bush, armed with thorns, and it contained four young nearly ready to leave their nest.

Pyrranga ludoviciana. - One or two seen. The species was, for the most part, departed.

June 17th, 1884. Ft. Verde, A.T.

452. *Spiza amoena*. ♂ ad. 144; 235; 74; 60; cul., 11; gape, 13; tarsus, 17; uie, 18; cl., 5.3. Iris, hazel. Bill bluish-black. Legs, feet & claws, brownish-black.

453. *Soniaphaea coerulescens*. ♂ ad. 188; 290; 89; 78; cul., 16; gape, 18.5; tars., 21; uie., 24; cl., 7. Iris, dark brown; Bill, with maxilla blue-black; mandible bluish horn-color. Legs, feet & claws purplish brownish-black.

454. *Soniaphaea coerulescens*. ♀ ad. 174; 274; 83; 71; cul., 15; gape, 18; tarsus, 20; uie., 22.5; cl., 6.5. Iris, hazel. Bill, with maxilla brownish-black; mandible bluish-horn-color. Legs, feet, and claw brownish-black.

455. *Cordeiles acutipennis texensis*, Lawrence. ♂ ad. 230; 550; 190; 114; cul., 7; most, 5.5; gape, 26.5; tarsus, 15.5; uie., 19.5; cl., 5.5. Iris, brown. Bill, black. Legs & feet, fleshy-brown; claws, blackish. This bird was inhabiting a level plain, destitute of bushes, save a few small scragged ones just where the Night Hawk was shot. I was flying about in the bright glare of the sun during the hottest part of the day.

June 18th, 1884. Ft. Verde, A.T.

Spiza amoena. - Another pair found breeding up Beaver Creek, near the stream.

Phainopepla nitens. - A nest was found in the forked top of a small mesquite bush up Beaver Creek. The nest was difficult to discover although the male bird, although shy and refusing to let me approach near enough for a good shot, would not leave the vicinity for any length of time. The female withdrew and was even more shy than the male. With much difficulty I secured the male by using large shot at long range, and, after following the female for a long time I finally secured her by a lucky wing shot, using my last cartridge. The ^{two} eggs were preserved with the nest. Incubation was considerably advanced.

A second nest was found in a fork of a tall sumach-tree, fifteen feet from the ground. It contained two perfectly fresh eggs. The female was shot & mortally wounded, but fell in a thicket of sumach-trees overgrown with grape-vines, and could not be found. The male bird was not seen near the nest. I unfortunately broke one egg. Thus my first three nests were located in as many different species of trees, showing that the birds have no very marked preference in that direction, but are governed principally by their surroundings. *Icteria virens longicauda*. - A set of 3 fresh eggs was taken with the nest. It was placed in a grape-vine overhanging a water-course. Another

nest was built in rather exposed situation, in the fork of a sumach tree, six feet from the ground, and contained four eggs, about to hatch. Zenaidura carolinensis. - A set of two eggs was taken from the branches of a sumach about seven feet from the ground. So gentle was the sitting parent that I might have caught her in my hand, as I sat in the saddle.

Icterus cucullatus. - A nest was found attached to the extremity of a lowest branch of a large sycamore tree, where it was entirely ^{hidden} out of reach. I shot the male parent to make my identification of the species absolute certain, since I was unable to reach the nest.

Sporophaga gambeli. - Fr. Vogles saw a set of Quail's eggs which were taken on a rancho down the Valley on June 14th. I have failed to find a nest, although the birds are abundant generally dispersed. They are for the most part mated and found in pairs, the male singing in a bush; but small flocks of four to six birds are still frequently seen.

Chondestes grammacus. - The nest found a few days since was deserted to-day; and I also saw young on wing across the River.

Tyrannus vociferans. - Have seen but one brood on wing, June 16th.

Sayornis sayus. - The young have been flying about since the first week in June.

Pipilo aberti. - The first broods have in most instances left the nests, & many pairs are nesting again.

456. Verdin; Yellow-headed Citreoline. ♂ juv.
3032. 106; 168; 50; 46; cul., 8.5; gape, 9. Tarsus, 15.5; mte., 12.5; cl., 4.6. Sides, dark brown. Bill, with basal half of mandible & angle of mouth ^{orange} yellow; remainder dusky brown. Legs & feet plumbeous; claws brown. This is a typical specimen of a well-developed first plumage.

457. Black-chested (throated), Long-tailed Lizard. ♂ ad.
3 Total length, 181; between nose & anus, 81; anus to tip of tail, 100; forearm, 8.5; fore foot, 13.5; longest claw, 4. Leg, 15; hind foot, 30; longest toe and claw, 21; claw, 3.5; thigh, 17. This is the commonest lizard at Mojave.

458. Helminthophaga luciae. ♀ ad.
✓ 3033. 111; 169; 52; 42; nost., 7; gape, 11; tarsus, 15; mte., 12; cl., 3.6. Sides, brown. Bill, blackish, with sides & base of mandible horn-color. Legs feet and claws dusky plumbeous.

459. Icterus cucullatus. ♂ ad.
✓ 3034. 209; 280; 88; 95; cul., 20.5; gape, 21; tarsus, 22; mte., 21; cl., 6.

460. Phainopepla nitens. ♂ ad. Parent of set $\frac{B}{2}$ No.
✓ 3035. 209; 298; 93; 101; cul., 12; nost., 8; gape, 16; tars., 19; mte., 18; cl., 5.

461. Phainopepla nitens. ♀ ad. Parent of set No. $\frac{B}{2}$.
✓ 3036. 191; 274; 83; 88; cul., 12; nost., 8.5; gape, 17; tars., 18; mte., 18.5; cl., 5.

462. Merula erythrogastra ♂ ad. ^{194; 274; 83; 88; cul., 12; nost., 8.5; gape, 17; tars., 18; mte., 18.5; cl., 5.}
✓ 3037. 186; 337; 124; 96; cul., 9.5; nost., 6.5; gape 16; tars., 11; mte., 17.5; claw 5.3.

463. Goniaphea cornelia ♂ ad.
✓ 3038. 181; 283; 89; 74; cul., 16; gape 18.5; tars., 20.5; (181) mte., 24; claw 7.

464. Phainopepla nitens. ♂ ad. Parent of set $\frac{D}{3}$ No.
✓ 3039. 198; 291; 89; 100; cul., 13; nost., 8; gape 17; tars., 18; mte., 19; claw 5.

465. Phainopepla nitens. ♀ ad. Parent of set $\frac{D}{3}$ No.
✓ 3040. 202; 286; 87; 96; cul., 12; nost., 8; gape, 18; tars., 17.5; mte., 19; cl., 6.

466. Phainopepla nitens. ♂ ad. Parent of set 2 young No.
✓ 3041. 194; 280; 90; 97; cul. only 10; nost., 6.5; gape, 16; tars., 17; mte., 17; cl., 5.5. Bill, etc. unusually small.

467. Phainopepla nitens. ♀ ad. Parent of set 2 young No.
✓ 3042. 206; 298; 92; 101; cul., 12; nost., 9; gape, 18; tarsus, 19; mte., 19; cl., 5.5. Sides light red, Bill, legs, feet & claws black with slight brown tinge.

468. *Phainopepla nitens*. ♂ ad. Parent of Set $\frac{3}{3}$. No
 ✓ 3043, 204; 288; 89; 100; cul., 13; nost., 8.5; gape, 18;
 tars., 18; mte., 18; cl., 5.
469. *Phainopepla nitens*. ♂ ad. Parent of Set $\frac{2}{2}$. No
 ✓ 3044, 15; 302; 96; 105; cul., 12; nost., 8; gape, 17.5;
 tarsus, 18.5; mte., 18.5; cl., 5.
470. *Phainopepla nitens*. ♀ juv. Young of the year.
 ✓ 3045, 189; 280; 85; 86; cul., 12; nost., 7.5; gape, 17;
 tarsus, 18; mte., 18.5; cl., 5.5. Irides, reddish-brown.
 Bill, blackish; yellow narrowly along basal two-
 thirds of commissure & at angle of mouth.
 Legs, feet & claws, blackish. This is a good
 example of a developed first plumage.
471. *Phainopepla nitens*. ♀ juv. Small nestlings of
 ✓ 3046, which Nos. 466 & 467 were parents.
- ✓ 3047 & 472 *Phainopepla nitens*. — juv. do do do do.
- ✓ 3048 & 473 *Aegialitis vociferus* ♀ ad.
 252; 505; 155; 96; cul., 22; gape 23.5; tars., 35;
 mte., 25; claw 5. Bare part of tibia, 20.
Harpodynchus crissalis. — A nest was found
 in a dense haw bush 2 feet from ground which
 contained 4 young ones about a week old.
- Pyrrocephalus rubinus mexicanus*. — Mr. Vogdes
 shot at one beside the Verde, at Jordan's crossing.
- Chordeiles acutifennis texensis*. — A number were
 seen flying about in the evening twilight.
- Nyctardea grisea naevia*. — Yesterday and
 two days before, towards evening I saw a Heron
 which was doubtless of this species, though not
 positively identified.
- Musk Turtle. — One found walking in the
 sand an hundred feet from the Verde. It was
 a large one, with clean shell & good markings,
 but escaped from my pocket while I was
 riding. *Kinosternon soroeciense* Le Conte.
- Chondestes grammacus*. — Young seen flying.
- Phainopepla nitens*. — Four nests were found.
 In each instance the male bird was much
 the boldest in looking after its nest, flying

nervously from one mesquite bush to another,
 always silent, however, save a "wanged" note
 that uttered a low chirp when caught.
 The females did not leave the locality, but
 were exceedingly shy and undemonstrative.
 All four male birds were procured with
 little difficulty, but only two females could
 be captured; but I may get them to-morrow
 as there were ~~the~~ only ^{two pairs} ~~ones~~ in the locality where
 the last two nests & 2 males were procured &
 they could probably be identified from the
 locality where found.

The first nest contained 3 eggs, the second,
 two very young birds, the third, 3 eggs, and
 the fourth, two eggs. All of the nests were
 built in mesquite bushes, in a fork. They
 were all found on the level bottom near
 the Verde River.

June 20th, 1884. Ft. Verde, Arizona.
Eupidoxa trillii pusillus. — Three nests were
 examined. One in a willow ten feet from the
 ground contained 3 eggs nearly hatched. The
 second, in the ^{lower} fork of a little cottonwood had
 a single egg in it. A third was in a willow
 sapling 6 feet high & contained large young ones.
Zenaidura macroura. — On June 19th half grown
 young were found in the nest of a bird that sat
 so closely that she might easily have been taken
 from the nest by hand. The young are clothed
 with long pin-feathers looking like wires and
 resembling the young of the Cuckoos (of the genus
Coccyzus?). Young Doves were also found today
 as well as a nest containing a single fresh egg.

Phainopepla nitens. — Found a nest in the
 fork of a tree which resembles a willow, which
 grows plentifully along the streams here, bearing
 a handsome flower like the catalpa blossom
 in shape, and a long pod. The nest was
 twelve feet from the ground. This set, $\frac{1}{3}$,

contained 3 eggs. I shot the male parent (No. 435) on June 13th, but failed to discover the nest, but found it to-day, deserted.

Another nest (Set 2 No. 1) was found in a cedar upon a hill side, near a sluice. The nest was placed in an upright fork of the cedar branch, and both parents were ~~to~~ guarding it. I wounded the female and she fell dead across the sluice where I ^{afterwards} ~~was unable to recover her~~; but the male bird was taken. As usual the female was much more shy than her mate.

Anhinga americana. - One was found in the sluice at the Brewery. I rode up to the edge of the bank and saw it within a few feet of me, swimming beside some Cut-tails (she swam a little way, then rose and alighted upon the ground on the opposite side and ran a long way up the stream with great swiftness clucking loudly. I am told that they are abundant here in winter, and that a number breed along the river in the Lower Verde among the ranches.

Ceryle mexicanus. - Mr. Davis, who lives a few miles down the River saw several Water Ducks, a bird well known to him, on the Verde River near his rancho East of Jim.

474. *Sayornis nigricans*. Black Flycatcher ♀ ad.
✓3049. 181; 284; 87; 83; nost., 10.6; gape, 20; tars., 17; mte., 15; cl., 5. Sides rich dark brown. Bill, black, brownish at base of mandible; mouth, yellow. Legs, feet & claws, black. Its abdomen indicates to its having recently engaged in parturition.

475. *Melospiza melodia fallax*. ♂ ad.
✓3050. 165; 220; 66; 77; cul., 18; gape, 14; tars., 23; mte., 21; cl., 5.5. Graduation of tail, 8. Sides brown. Bill with maxilla black, with a narrow olivaceous line along lower margin. There is a corresponding line of olive along the upper border of the mandible, which is otherwise bluish horn color. Legs, feet and claws, brown.

476. *Molothrus ater obscurus* ♂ ad.

✓3051. 189; 320; 101; 77; cul., 16; gape, 16.5; tarsus, 23; mte., 24; claw, 5. Sides, brown. Bill, legs, feet & claws, black. It appeared with *dephthiosis* & greatly enlarged.

477. *Phainopepla nitens*. ♂ ad. Parent of Set 3-1 No.
✓3052. 208; 292; 92; 100; cul., 12; nost., 8; gape, 18; tars., 18; mte., 19; cl., 6.

478. *Phainopepla nitens* ♂ ad. Parent of Set 3-1 No.
✓3053. 207; 297; 92; 100; cul., 12; nost., 7.5; gape, 17.5; tarsus, 17.6; mte., 18.5; cl., 5.

June 21st 1884. Ft. Verde, A.T.

479. *Sterna corens longicauda* ♂ juv. Just from nest.
✓3054. Accompanied by parents. 160 x 235; cul., 12.5; tars., 26.

480. *Chondestes grammacus* ♀ ad.
✓3055. 172; 273; 85; 73; cul., 13; gape, 15; tars., 20; mte., 20; cl., 5.2.

481. *Trochilus alexandri*. ♂ ad.
✓3056. 93; 110; 41; 28; cul. from feathers 18; gape, 22.5; tars., 4; mte., 7.5; cl., 3.5. Iris, brown. Bill, legs, feet & claws, black.

482. *Phainopepla nitens*. ♀ ad.
✓3057. 194; 281; 90; 93; cul., 11.5; nost., 8; gape 17; tars., 18; mte., 18; claw 5. Parent of Set 3-1.

483. *Phainopepla nitens*. ♂ ad. (about)
✓3058. 205; 293; 90; 98; cul., 12; nost., 8; gape 17.5; tars., 18.5; mte., 19; cl., 5.5. Parent of Set 3-1.

484. *Picus scalaris* ♂ ad.
✓3059. 192; 340; 103; 71; cul., 23.5; gape 26; tars., 18.5; mte., 21; claw 8.5.

485. *Goniaphea cerulea*. ♂ ad.
✓3060. 181; 285; 89; 74; cul., 16; gape 17; tars., 21; mte., 22; cl., 6.5.

Phainopepla nitens. - A nest was found in the tall species of mesquite, which contained two fresh eggs and the shell of a third egg which had been broken previous to my discovery of the nest. Both of the parents of this nest (Set No. 3-1) were taken.
Goniaphea cerulea. - This species is fairly common in the bottom land among low

bushes. They sing very sweetly and like to sit on a tree near the bushy bottom land which they inhabit and where the females are now assiduously looking after their domestic concerns. If no trees are near on which to perch when singing, they select a bush up on the nearest sloping hillside.

A nest of *Empidonax pusillus* & one of *Zenaidura* were taken.

June 22nd, 1884. Ft. Verde, A. S.

486. *Chordeiles acutipennis texensis* ♂ ad.

3061 230; 358; 18.4; 119; cul., 7; nost., 6; gape, 26; tarsus, 14; mte., 18.5; cl., 5.5. Irides dark hazel.

487. *Pipilo aberti* ♀ ad.

3062 235; 284; 85; 116; cul., 16; gape, 17.5; tars., 29; mte., 26.5; cl., 9.

488. *Dendroica aestiva* ♀ ad.

3063 125; 182; 56; 47; nost., 7.5; gape, 13; tars., 18; mte., 14; claw, 4.

489 *Vireo pusillus*

♂ ad.

3064 130; 183; 56; 54; nost., 6.2; gape 14.5; tars., 19.5; mte., 14; claw 4.5.

Aquila vociferans. - We found several pairs of these birds which without doubt had nests or eggs, but although we searched carefully we did not secure the specimens. *Lophortyx gambeli*. - Some of the Gambel's Quail are now with young, others are laying or setting and still others are still in flocks and have not commenced to nestle.

The farmers on the ranches down the valley have ploughed up hundreds of nests during the past fortnight which were built in the alfalfa.

We found a nest filled with shells from which the young quails had recently emerged.

Mr. Vogdes found a single egg on the bare ground in the center of a ~~flat~~ large clump of the low mesquite, which he said was a Quail's egg, but, from the glimpse I caught of the egg I think it belonged to a *Lark*.

a some species. We took a set of fresh Doves eggs, and saw a nest containing a single fresh egg, whilst other nests contained young.

The *Chordeiles acutipennis texensis* was flying amongst the mesquite bushes in the blazing sunlight, and alighted on a branch of mesquite once or twice.

Choke "Verde Salmon" in "Peter Johnston's" since to-day.

June 23rd, 1884. Ft. Verde, A. S.

440. *Carpodacus frontalis*. ♀ ad. flew in the house & cage. 3065 155; 248; 76; 66; cul., 11; gape, 13; tars., 18; mte., also 18; cl., 5. Irides dark hazel. Bill with maxilla dusky olive-brown; mandible flesh-color, tipped with dusky. Legs feet & claws, purplish brown.

Dimensions of specimens not skinned: -

Lophortyx gambeli Nutt. Gambel's Quail ♀ ad. Cherry Creek near Fort Verde Arizona, April 26, 1884. 278; 379; 11.8; 102; cul., 12; gape 15; tars., 31; mte., 37; cl., 9.

Myiarchus

♂ ad, May 1, 1884, Fort Verde, Arizona - 208; 320; 95; 93; bill measured from nostril 14; gape 26.4; tars., 23; mte., 18.5; claw 6.7.

Chordeiles

Nighthawk. ♀ ad, May 12, 1884. Fort Mojave, on the Colorado River, in Arizona. 206; 513; 173; 106; bill, measured from nostril, 4.5; culmen, 7; gape, 24; tarsus, 14; middle toe and claw, 19; claw, 5.

Molothrus ater obscurus (Gmel.) Coues. Dwarf Cowbird. ♂ ad. May 13, 1884. Fort Mojave, Arizona.

189; 320; 103; 78; culmen, 17; gape, 17; tarsus, 24; middle toe and claw, 25; claw, 7. Iris, hazel.

Bill, Tarsi, feet and claws, black.

Icteria virens longicauda (Lawr.) Coues. Long-tailed Chat. ♂ ad. May 13, 1884. Fort Mojave, Arizona.

194; 255; 80; 92; culmen, 13.5; nostril, 9.5; gape, 17;

tarsus, 25; middle toe and claw, 20; claw, 5.5;
Irides, hazel.

Pipilo aberti, Baird. Abert's Towhee ad.
May 13, 1884. Fort Mojave, on the Colorado River, Arizona.
238; 290; 87; 109; culmen, 16; gape, 16.5; tarsus,
30; middle toe and claw, 27.4; claw, 9.4.

Melospiza fasciata

Song Sparrow. ad. May 13, 1884. Fort Mojave,
Arizona, on the Colorado River.
159; 210; 65; 72; culmen, 13; gape, 13.5; tarsus, 21;
middle toe and claw, 20; claw, 6.

106

June 26th, 1884. Ft. Verde, Arizona.
497. *Fiber zibeticus pallidus* ~~missus~~. ♂ (ad.?)
No. 106. Nose to eye, 30; ear, 61; occiput, 68-;
root of tail, 345; ears, height, 21; width, 19;
fore-arm, 42; forefoot, 32; longest claw, 9;
leg, 69; hind foot, 62; longest claw, 12;
Tail, from root to end of vertebrae, 103.
Distance between claws of outstretched fore feet, 230.
Nose to end of outstretched hind legs, 375.
Shot while swimming down the sluice below
the Brewery. Longest nasal bristles, 62.

492. Cotton-tail Rabbit (*Lepus arizonae major*).
No. 105. ♀ juv. Very young. Total length (including
tail), 175. Was sitting on a sand-flat, near
the Verde River.

493. *Helminthophaga luciae*. ♂ ad.
✓3066. 118; 185; 57; 48; nost., 7; gape 10.5; tars., 16.5;
Mtc., 13; cl., 4.

494. *Helminthophaga luciae* ♂ ad.
✓3067. 111; 177; 55; 44; nost., 6; gape 10; tars., 16;
Mtc.: 12.5; cl., 4.

495. *Phainopepla nitens*. ♂ juv. Still retains traces of feminine
✓3068 plumage. Probably bird of the last year.
208; 288; 91; 96; cul., 12; nost., 8; gape 17.5;
tars., 18; Mtc., 18; cl., 5. Iris less light red than
the adult.

496. *Phainopepla nitens* ♂ ad.
✓3069.

204; 285; 90; 100; cul., 12; nost., 8; gape 18;
tars., 17; Mtc., 18; cl., 4.

497. *Icteria virens longicauda*. ♂ ad.
✓3070 199; 257; 82; 91; cul., 15; nost., 10.6; gape 18.5;
tars., 27; Mtc., 21.5; claw 7.

498. *Astragalinus psaltria arizonae*. ♂ (ad.?)
✓3071. 121; 205; 64; 48; cul., 9.5; gape 11; tars., 14;
Mtc., 15; claw 5.

499. *Vireo*
127; 180; 55; 53; nost., 7; gape 14; tars., 20;
Mtc., 15; claw 5. (Not skinned) ~~Not skinned~~

500. *Vireo*
128; 181; 55; 53; nost., 7; gape 14; tars., 20;
Mtc., 14.5; claw 5. ~~Not skinned~~


✓3072. *Harporthynchus crissalis*, Henry. Red-vented Thrasher.
I juv. in full first plumage. June 29th, 1884. Ft. Verde.
The Gambel's Quails are breeding near the
Quarters around the Post. On June 24th, Lieut.
Carrington brought me a clutch of ten eggs of
Lophortyx gambeli which he got beside the Verde, at
the Post. The nest was situated beneath a heap of
driftwood & debris, and composed of a few leaves and
a feather or two. His dog "pointed" the old Quail
on its nest. A day or two ago I

flushed a Quail from some bushes adjoining my little
back yard; and a number of pairs are breeding in the vicinity.

On June 26th I found & secured the following nests.
Vireo belli pusillus. - The nest was built in
a larger mesquite bush, 3 feet from the ground, and
was deserted by the builders, doubtless owing to the
incursion of a fox in the shape of *Molothrus ater*
obscurus, one of whose ^{parasitic} eggs was found in the nest
along with two eggs of the Vireo.

Dendroica aestiva. - A nest & two eggs were
taken from a little Cottonwood about seven
feet from the ground. The old birds, as usual,
made no demonstration about the nest.

Phainopepla nitens. - A nest was taken with its three somewhat incubated eggs from a fork in a dense branch of the low mesquite now in full blossom and very fragrant.

Geococcyx californianus. - The nest found June 21st, was again visited and found to contain only ~~the~~ one egg as it did when first discovered. The old birds were not seen about on either occasion. The nest was built upon a platform composed of the four  slightly upward slanting prongs of a twice forked branch, all of the branches lying in nearly the same plane. The nest itself was only a little more conspicuous than a Dove's. It was composed of rather small sticks laid across the four branch and raised upon one side to make it sit level upon the branches. A little dirt and a weed or two with the roots & dirt adhering a few flat pieces of cow droppings were the only other materials used. The tree was larger top of mesquite.

Phainopepla nitens. - No. 3069 is the parent of the suite of eggs referred to above. The female did not come about the place although I remained in the vicinity for an hour; but the male was quite bold, and uttered a low chirp which I recognized as coming from this bird for the first time, and while sitting upon a mesquite bush sang a low song which was quite pretty.

Icterus bullocki. - Many families of these birds were seen ^{despited} amongst the mesquites having apparently left the cottonwoods for the bush. The young birds fly well and are very handsome in their first full dress. I suspect that they feed upon the Hawthorn which is now ^{plentifully} ripe and abundant, the Hawthorn being interspersed among the mesquites & other bushes.

but I have not as yet seen them - later in the series. *Phainopepla nitens* feeds upon them more largely indeed at this season, and this may be the season they choose to breed here in such numbers.

June 30th, 1884. Fort Verde, Arizona.
The thermometer reached 106.5° today. Yesterday the maximum was 106°.

Sayornis sayi. - A number of these nice birds have been reared about the quarters in Officers Row and now the young birds are abundant and exceedingly gentle considering the abundance of their enemies, *Felis domesticus*; and their plumage is fully developed and exquisite in its softness, fullness and colors. That of the old birds is much worn at this season. Half a dozen of them may be seen sitting in a row upon a hammock, calling for food, and giving in an amusingly wistful and interested manner every passing insect. Say's birds are very engaging little things, and we enjoy their society much.

Tyrannus

These Tyrants are now flying well, but are still objects of great solicitude to their parents. One pair had a nest in a cottonwood in front of our quarters, and made it warm for all bird stranger who came without invites. The young like to keep together, and are loath to break up an intimacy with each other which has been so close in times past. When learning to fly, they may frequently be seen sitting in a row upon a dry limb or on a house-top, flying in turn to some other perch with much chattering and outcry.

July 1st, 1884. Fort Verde, Arizona.
✓ 3073. *Icterus bullocki* ♂ juv. in 1st plumage. still attended by its parents, and accompanied by its fellow nestlings 200 x 315; 93; 85; cul. 17; gape, 18.5; tars., 25.5; mte., 23; cl. 6.5. 1000.

Iris, dark brown. Bill, with maxilla dusky olive-brown; mandible, flesh-color, tinged with purplish brown. Tarsi, feet & claws, pale flesh red-color; claws, horn-color. This specimen may be taken as a type (and I therefore have given its dimensions) of the group, ♂ plumage.

Sayornis sayi. - I noticed a Flycatcher flying high in the air uttering a tri-syllabic note in a vivacious, ^{musical} tone which really was very pretty and actually amounted to a song.

July 2nd, 1884. J. H. Verde, P. I.

Carpilo aberti. - Found a nest seven feet from the ground, resting on a large dead limb that rested lay upon some small branches of a little cottonwood tree, close beside the Verde River. The nest contained three eggs, and the parents were shy and could not conveniently be secured although they called loudly from the opposite bank of the Verde. They are shy about their nests.

Zenaidura macroura. - Young seen on wing.

501. Ground Squirrel (*Tamias harrisi*). June 26, 1884. ♀ juv.
(No. 107.) Nose to root of tail, 123; tail from root to end of hairs, 87
Total length, 210. Young of the year.

This species utters a metallic clattering note, and is extremely curious. A few chirrupings will suffice to bring them to the entrance of their burrows at any time; and they will frequently run directly up to within a few feet of you; then stopping & stamping and jerking their tails and presently beating a hasty retreat, with a loud note diving into their burrows, the entrances of which are beneath the mesquite and other bushes.

V 3074. Icterus cucullatus, Swain. Hooded Oriole, Ad.
217; 285; 91.; 102; culmen, 21.5; gape, 23; tarsus,
23; mte., 22; cl., 7. Iris, hazel. Bill glossy black
with basal one-half (nearly) of mandible, pale blue; the
black of lower mandible extending from the feathers
of chin to the tip. ^{the border of the} two colors on the mandible
is sharply defined, oblique extending from below forward $\frac{2}{3}$

upward. Tarsi and feet, bluish lead-color; claws, dusky. The yellow feathers of the occipital region and posterior part of crown have long black hairs attached to them, some measuring 12 mm.

Sceloporus July 7th, 1884, Fort Verde, Arizona.

Sceloporus "Young Camelion".— A young specimen measuring from nose to anus, 73 mm.; anus to end of tail, 98 mm., was shot in the cave near my quarters, & preserved in alcohol.


Pandion haliaetus carolinensis. - A pair are fishing
in the Verde in view from our house.

3075. Tyrannus verticalis. ♀ juv. 1 young in first
plumage, still with parents. Irides, dark hazel. Bill,
with maxilla black; mandible, brownish-black. Skin
at corner of mouth, yellow. Tarsi & feet, plumbeous; claws,
blackish. 208; 353; 110; 87; nost., 11; gape, 25; tarsus,
18; mte., 20; cl. 6. Plumage well developed.

✓ 3076. Petrochelidon lunifrons. ♂ ad. It was gathering mud for its nest, beside the Verde River, and its beak + throat were crammed with it. Nales build nest. 142; 298; 103; 51; cul., 9; nost., 5.6; gape, 16; tarsus, 11.5; ule., 16.5; el., 5.5. Irides, dark hazel.

✓ 3077. Picus scalaris, Wagler. ♂ juv. Young in first plumage, well developed. 190; 335; 102; 70; cul. 22; gape; 24; tarsus, 19; mte., 21; cl., 8.5. Iris, hazel. Bill blue-blackish; horn-color slightly at base on gonys. Tarsi & toes greenish plumbeous; claws, dusky. Sex carefully determined.

July 8th, 1884. Fort Verde, Arizona.

Phainopepla nitens. - This is the most silent bird I know. This afternoon I went fishing in the Verde, and a male bird remained in my vicinity a long time, but never uttered a syllable. He sat upon the dry twigs on the top of a Sycamore and flew out in perpetual circles after what seemed to be imaginary insects, as purely for amusement.  Again showing manner of flight.

Penaeidura carolinensis. - A nest containing two fresh eggs, was found in a nest composed of stems of herbs, a few twigs and one feather, placed in a grape-vine, growing upon a sycamore tree. *Fiber gibethaeus*. Muskrat. While sitting quietly fishing upon the river bank, a couple of muskrats were seen swimming towards me. I remained quiet, and one of them swam up to within a few feet of me, and after diving several times secured the root it wanted and then climbed out upon the bank within five or six yards of me and proceeded to devour it quite at leisure, although it cast an occasional furtive glance in my direction.

✓ 3078 *Guiraca caerulea* ♀ ad. 180; 280; 83; 73; cul., 17; gape, 18; tarsus, 22; mte., 23; cl., 7.

✓ 3079. *Sayornis sayi* ♂ juv. Young in first plumage, fully developed. Still cared for by parents. Irides, dark hazel. Bill, black; mandible brownish purplish-brown at base; skin at corner of mouth, yellow. Tarsi, feet and claws, black. 194; 323; 101; 87; nost., 10; gape, 23; tarsus, 20; mte., 17; cl., 6.

July 10th, 1884. Fort Verde, Arizona.

✓ 3080. *Vireo vicinior*, Coes. Gray Heronlet ♂ ad. 145; 214; 63; 62; cul., 12; nost., 8; gape 15; tars., 19.5; Mte., 15.5; cl., 5.5. Iris hazel. Bill,

3081. with maxilla dusky; mandible plumbeous. Tarsi and toes, plumbeous. claws, dusky. Very worn summer plumage.

3081. *Amphispiza bilineata* ♀ juv. A nearly perfect albino. The rectrices exhibit a faint dusky hue, on the inner webs for their basal 2/3, underneath. Iris, pink (horned). Bill, tarsi feet and claws, white. The back shows the faintest possible trace of brown, and all of the feathers of the body are pale ashy at base, although pure white on the surface. It is a bird of the year and was found in a small flock of its species. 135; 200; 61; 59; cul., 12; gape 12.5; tars., 20; Mte., 18.5; claw, 5.5.

3082. *Pucara ruficeps boucardi* ♂ ad. Worn breeding plumage. 159; 212; 63; 71; cul., 13; gape, 14; tars., 20.5; Mte., 19; claw, 5. Iris hazel, maxilla brownish black, mandible plumbeous, tarsus light brown, feet & claws darker brown.

3083. *Tyrannus vociferans* ♀ ad. 117; 380; 112; 88; cul., 21.5; nost., 15; gape 27; tars., 20; Mte., 21; claw 7. Bill black, mandible tinged with brown, tarsi, feet and claws black.


✓ 3084. *Icterus parisorum* ♂ ad. 222; 328; 101; 94; cul., 24; gape, 25.5; tars., 25; mte., 25; claw 7. Bill, with maxilla and terminal half of mandible black, basal half of mandible, blue. Tarsi and feet bluish gray - claws brownish black.

✓ 3085. *Icterus parisorum*. ♂ juv. In first plumage. 207; 320; 101; 91; cul., 21.5; gape 23; tars., 24; Mte., 24; claw 8. Bill with maxilla brownish black, mandible dusky flesh color, tarsi & feet bluish gray - claws brown.

✓ 3086. *Icterus parisorum*. ♀ juv. In first plumage. 210; 317; 97; 86; cul., 21; gape 24; tars., 25.5; Mte., 25; cl. 7. Bill with maxilla olive brown - mandible pale purplish flesh color - both mandibles very slightly tipped with white. Tarsi & feet bluish gray - claws plumbeous brown.

To-day I went hunting for Deer and Antelope. I took my Soldier Gilbo, who rode his cavalry horse and carried his carbine in the boot attached to the saddle. He also carried my shotgun; and I rode my white mare & carried a "Long Tom" or Infanterie rifle of 45 calibre.

We rode east 15 miles into the cedar and pine-clad buttes, bordering the San Francisco range. After riding ten miles we found water in pools, in a nearly dry bed of a large watercourse. Here we found about an hundred Doves (*Penaeidura carolinensis*).

which Dr. Conser says concerning that the sight of Doves in Arizona is a more certain indication of water than the site of a stream. After watering our horses, drinking what we wanted and filling our canteens we left the only water to be found in that region. Besides Doves there were a number of Flycatchers, House Finches (*Carpodacus frontalis*) and Goldfinches (*Astragalinus psaltria*); all, perhaps excepting the Flycatcher, attracted by the water. Gilbo shot a number of Doves and plucked them; but when cooked we found them tough. One contained two eggs, one in the oviduct had attained the usual size and was covered with a thin calcareous coating, which broke and cracked when I attempted to "blow" the egg. The other egg was about as large as this figure  and was all yolk without albumen.

We followed an old trail about four miles, on a high ridge, gradually ascending into the mountains. On the road we passed several large colonies and some smaller ones of the "Century Plant" or Agave (*Agave palmeri*) called, Meskal by the Mexicans who distil it and make a highly intoxicating alcoholic beverage from it. The flowers of this stately plant are bright yellow. The plants vary in size from ten to twenty-five feet. We cut down a large one and cut from its base some of the crisp heart, which has a pleasant sweet taste when first eaten, but leaves a highly pungent after taste & decidedly peppery!

Tying our horses, we dismounted in one of these meskal groves and hunted for small birds among the cedars that here grow quite thickly among the malapai stones & rocks. A piece of pottery was found here, perhaps made by an ancient Aztec.

Wardhouse's Jays, Scott's Orioles and the Quail were found here, and several other species were found further on among the cedars & Pines of the mountains where I walked while Gilbo hunted some gulches for horned quine.

In some scattered cedars, I found a family and shot my first specimen of the Gray Heronlet (*Vireo vicinior*, Coues) which proved to be a male in worn breeding plumage. I had a long search for the bird which I afterwards found in a branch where it had caught fast in falling. By the time I had secured & identified this rare species, the balance of them had made their escape.

The three specimens of Scott's Orioles were a young male and female and their male parent. The balance of the family was seen but my supply of small shot had been exhausted by Gilbo in killing Doves, and there remained only a few cartridges lightly loaded with dust shot for Hummingbirds. Otherwise I could have secured the female & other young.

Overcome by the burning heat, and extreme thirst, I spread my coat on the ground and lay down beneath a cedar-tree, on the sloping side of a mountain to rest, after divesting myself of most of my clothing. While there several rare birds appeared: A female Black-headed Grosbeak (*Zamelodia melanocephala*) alighted in a cedar near me and uttered a note like the call-note of the Rose-breasted species. It alighted then upon a pine (dead) tree and uttered this note for some time. I approached it to get a close shot with my small shot, but it flew to a little distance; and while I watched it, a Cassin's Flycatcher (*Tyrannus vociferans*) alighted on the limb where it had left, and was shot. This was the first one I have identified.

A thunder storm was in progress

at a distance, and soon the clouds cast an agreeable shadow over the place where I was, and I at once got my traps on and began to look around me. A Plain Tit (*Lophophanes inornatus*) was seen in a pine. A little way below me was an enormous precipice near the summit of which were a family of White-throated Wrens (*Catherpes mexicanus canescens*) were found. Failing to secure a specimen with a charge of dust, my next effort similarly failed when I fired at a little Gnatcatcher (*Psaltriparus caerulea*), the only one of the genus I ever saw alive.

A family of Boncard's Sparrows (*Pucaria ruficeps boncardi*) were surprised under a log amongst some scrub oaks, and some flew into the cedars while others escaped by running, mouse-like, through the bushes & grass. I shot the male parent, and afterwards saw several others beside a dry watercourse, amongst the oak bushes.

The Western Red-tailed Hawks now fly about in families the young and old together.

We returned by Cedar Creek, having seen no recent signs of Deer. We did see one cast antler. In the vicinity of Cedar Creek, good-sized flocks of Black Crested Flycatchers (*Phainopepla nitens*) were seen. One was seen sitting on a cedar-tree on the plain near the foothills some miles from the only water in that region.

Near the Indian graveyard were seen a number of Shore Larks (*Eremophila alpestris*), and in the morning we saw & heard a number of Rock Wrens (*Salpinctes obsoletus*) on the cliffs opposite the Post. We also saw a solitary Great Blue Heron flying across the plain on top of the cliffs, and a number of Ravens

We reached home at ~~sundown~~ retreat, after a 30 mile ride, with three new birds:

Pucaria

Vireo vicinior *Cedrus*, Gray Vireo, and and *Tyrannus vociferans*,

young *Eremophila alpestris* were seen near the Indian graveyard. July 11th, 1884. Fort Verde, Arizona.

3087. *Myiarchus cinerascens* ♀ juv. in 1st plumage, accompanied by its parents. 206; 312; 92; 89; nost. 13; gape, 14.5; tarsus, 22; ule., 18; cl., 6. Iris, hazel. Bill, uniform brownish-black. Tarsi & feet, plumbeous; claws, dusky brown.

3088. *Tyrannus verticalis* ♂ juv. in 1st plumage accompanied by its parents. 214; 387; 117; 92; nost., 12.5; gape, 25; tarsus, 18.5; ule., 20.5; cl., 6. Bill, with mandible horn-color at base; residue of bill, brownish-black. Irides, hazel. Tarsi & feet, plumbeous; claws, dusky.

✓3089. *Melospiza fasciata fallax* ♂ ad. 163; 214; 62; 71; cul., 13; gape, 13.5; tarsus, 23; ule., 21; cl., 6. Iris, brown. Bill, with maxilla dusky brown; mandible, horn color. Tarsi, feet & claws, brown.

✓3090. *Phainopepla nitens* ♂ ad. 206 x 285

✓3091. *Lophortyx gambeli*. ♀ ad. 280; 360; 111; 104; cul., 11.5; nost., 8.7; gape, 13; tars., 31; ule., 35; claw, 9. In exceedingly worn breeding plumage; its breast denuded of feathers.

Zenaidura macroura. - Found a nest in a willow containing two eggs nearly ready to hatch. The old bird trilled along the ground as usual.

Melospiza fasciata fallax was singing its best, and some were seen abroad with their young.

July 12th, 1884. Ft. Verde, Arizona.

3092

Hummingbird in first plumage; feeding about the Willow Bignonia

94; 117; 47; 28; cul. fr. gorial feathers 17

✓3013. *Lophortyx gambeli*, Nutt. 1 juv. young of the year. 212; 315; 98; 76; cul., 9.2; gape, 12; tars., 28; ule., 33; cl., 6. Occipital plumage, 22. Bill, dusky brown. Tarsi and feet, horn-color, mottled with brown.

✓ 3094. *Lophortyx gambeli*, Nutt. juv. (Young of the year.)
205; 312; 95; 71; cul., 8.7; gape, 11.5; tarsus, 27;
mtc., 36; cl., 6.5. Iris, hazel. Bill, dusky brown.
Legs + feet, brownish flesh-color; claws, dusky.
Occipital plumes 21.

✓ 3095. *Lophortyx gambeli*, Nutt. juv. (Young of the year.)
175; 275; 83; 54; cul., 9; gape, 11; tarsus, 26;
mtc., 30; cl., 6. Iris, hazel. Bill, with maxilla
brown, mandible, horn-color. Tarsi + feet, brownish
flesh-color; claws, dusky. Occipital plumes, 15.

✓ 3096. *Lophortyx gambeli*, Nutt. ♀ juv. (Young of the year.)
210; 312; 94; 72; cul., 10; gape, 12; tarsus, 27;
mtc., 30; cl., 7. Occipital plume, 23. Iris hazel.
Bill, brown; horn-color at base of mandible.
Tarsi + feet, flesh-color, marked with brown;
claws, dusky brown.

✓ 3097. *Lophortyx gambeli*, Nutt. juv. (Young of the year.)
187; 285; 90; 64; cul., 9; gape, 10.5; tarsus, 23.5;
mtc., 30; cl., 6. Bill, with maxilla brown; mandible
horn-color. Iris hazel. Legs + feet, brownish flesh-
color; claws, dusky. Occipital plume,

✓ 3098. *Lophortyx gambeli*, Nutt. juv. (Young of the year.)
199; 298; 91; 65; cul., 10; gape, 11; tarsus, 25;
31; cl., 6.5. Iris hazel. Bill, brown. Legs +
feet brownish flesh-color; claws, dusky. Occipital plume, 19.

3096. *Chordeiles acutipennis texensis*, Eat. 235; 535;
186; 123; cul., 6.5; nostril, 4.5; tarsus, 14; mtc., 20;
claw 5.5.

Lophortyx gambeli. — I found a large flock
and secured nine specimens with a single small
charge of No. 10 shot. Six of them were measured,
but owing to interruptions only 3 were skinned.
The one numbered 3096 was a female (♀). The
larger of the two remaining was a ♂ & the
smallest specimen a female (♀).

Accipiter fuscus. — One or two beside the Verde

A large black Hawk, having a broad
band of white across its tail, was seen beside
the Verde, where I flushed it twice, but did not
succeed in shooting it. It was *Accipiter fuscus*.

July 13th 1884. Fort Verde, Arizona.

3096, a. *Mouse. Mus musculus*. ♀ ad. Skull over.

Noted. Caught in a trap in the house, along with two others;
Icterus galbula. — The family of young Bullocks
reared in the Post spent the whole afternoon in the
cottonwood-tree in our yard, where they were very
noisy.

3096, b. *Mouse. Mus musculus*. ♀ juv. Skull with
No. 108 skull inside. Taken after the above.

July 14th 1884. Fort Verde, Arizona.

✓ 3097. *Astragalinus psaltria* ♀ ad.
106; 193; 59; 44; cul., 11; gape, 10; tarsus, 13;
mtc., 15; claw 5.

✓ 3098. *Carpodacus frontalis*, ♀ ad.
155; 240; 78; 66; cul., 12.5; gape 13;
tars., 18; mtc., 19; claw 5.5.

3099. *Dendroica aestiva*
135; 197; 63; 52; nost., 7; gape 13.5; tars., 19.5;
mtc., 16; claw 5. Bill, with maxilla & tip of
mandible olive brown, residue of mandible
pale yellowish - tarsi & dorsum of feet
pale plumbeous yellow undersurface of
feet yellowish - claws brownish yellow. Iris hazel.

✓ 3100. *Vireo belli pusillus* juv.
125; 175; 54; 50; cul., 10.5; nost., 6.5;
gape 13.5; tars., 20; mtc., 14; claw 4.
Iris dark hazel, bill, with maxilla
dusky brown, mandible bluish flesh color.
Tarsi and feet plumbeous, claws brown.

✓ 3101. *Petrochelidon lunifrons* ♀ ad. 143; 292;
104; 54; cul., 9; nost., 5.5; gape, 15.5; tarsus, 13;
mtc., 16; claw, 6.

✓ 3102. *Picus scalaris*, Mayl. ♀ juv. in 1st plumage.
179; 313; 94; 68; cul., 19; gape, 21.5; tarsus, 19; mtc., 20;
claw 8. Iris hazel.

(over)

✓3103. *Lanius ludovicianus excubitorides* ♂ juv. in 1st plumage
239; 333; 102; 110; cul., 18; gape 25; tars., 28;
mtc., 24; claw 8. Bill with maxilla brownish
black, mandible horn color at base, dusky
at tip, tarsi & feet dusky plumbeous,
claws blackish.

✓3104. *Lanius ludovicianus excubitorides* ♂ juv. in 1st plumage
226; 320; 95; 107; cul., 17; gape 25; tars., 28;
mtc., 24; claw 8. Bare space around eye
yellowish flesh color, Iris hazel, bill dusky
olive brown, with mandible horn color at
extreme tip and at base, tarsi & feet dusky
plumbeous, claws blackish.

✓3105. *Lanius ludovicianus excubitorides* ♂ juv. in 1st plumage
225; 315; 99; 107; cul., 16.5; gape 24; tars., 27;
mtc., 24; claw 8. Colors as above

✓3106. *Lanius ludovicianus excubitorides* ♂ juv. in 1st pl.
230; 323; 99; 107; cul., 17; gape 25; tars., 28;
mtc., 24; claw 9. Colors same as No. 3103.

3106a *Mus musculus* ♂ ad. July 13, 1884. Ft. Verde, A.T.

No. 109 nose to eye, 12; ear, 21; occiput, 25; root of tail, 85;
ears, height 15; tail, 90; between outstretched forelegs, 75;
" width 13; nose to end of outstretched hind leg, 120;
fore arm, 12; fore foot, 7; leg, 18; hind foot 15.
Quiraca caeryla was singing deliciously.

July 15th, 1884. Fort Verde, A.T.

✓3107. *Phainopepla nitens* (Sw.) Sel. ♀ ad.
203; 283; 90; 98; cul., 11; gape, 17; nost., 7.7;
tars., 18; mtc., 18; cl., 5.5. Parent of No. 3108

✓3108. *Phainopepla nitens*. ♂ juv. in 1st plumage,
still with parents of which the ♀ (No. 3107) was taken.
175; 277; 85; 75; culmen, 10; nost., 7; gape, 17;
tarsus, 18; mtc., 18; cl., 5; Iris, hazel;
Bill, brownish-black, yellow along gape & commissure for 1/2
full the distance. Tarsi & feet plumbeous; claws dusky.

✓3109. *Scleria virens longicauda* ♂ juv.
198; 240; 74; 92; cul., 15; nost., 10; gape, 18;
tarsus, 27; mtc., 22; cl., 6. Irides dark brown.
Bill with maxilla blackish; mandible pale brown.

Tarsi & feet, lead-color; claws, dusky.
3110. *Dendroica aestiva* ♂ juv.
135; 186; 59; 49; nost., 8; gape, 14.5; tars., 19;
mtc., 15; cl., 4.5. Iris, brown. Bill, dusky brown
above; sides of max. & whole of mandible, flesh-color.
Tarsi & feet, pale plumbeous-olive; claws, brownish
flesh-color.

✓3111. *Helminthophaga luciae*, ♂ juv. in 1st plumage still
with parent (No. 3113)

3112. *Geothlypis trichas* - juv. in 1st plumage.

✓3113. *Helminthophaga luciae* ♂ ad. parent of No. 3111.
118; 183; 56; 47; nost., 7; gape, 11.5; tarsus, 16; mtc., 14;
ear, 4. Sides, brown. Bill, blackish above, plumbeous
below. Tarsi & feet plumbeous; claws, brown.

3113a Long-eared Bat ♀ juv. Flew in our bedroom.
Georhynchus macrotis pallescens Miller.

July 16th 1884. Fort Verde, Arizona.

✓3114. *Cathartes mexicanus conspersus* ♂ juv. in 1st pl.
146; 196; 59; 59; cul., 21; nost., 14; gape 24;
tars., 18; mtc., 18; claw 5. Bill blackish on maxilla

✓3115. and tip of mandible - residue of mandible flesh color.

✓3116. *Salpinctes obsoletus*. ♂ ad. Parent of No. 3116.
155; 232; 74; 59; cul., 20; nost., 12.5; gape 23.5;
tars., 22; mtc., 20; claw 5.

✓3116. *Salpinctes obsoletus* ♂ juv. Progeny of No. 3116.
142; 218; 67; 52; cul., 17; gape, 21; nost., 11;
tarsus, 21; mtc., 17; cl., 4.5. Iris, brown. Bill, with
basal one-half of mandible, pale yellow; residue, brownish.
Tarsi, feet & claws, dusky plumbeous.

✓3117. *Salpinctes obsoletus* ♂ juv. This, and the two fellows,
were shot together & belonged to a different brood -
from the two above. 158; 230; 70; 58; cul., 19; gape,
24; tarsus, 22.5; mtc., 20; cl., 5.5; nostril 13.
Colors as above.

✓3118. *Salpinctes obsoletus* ♂ juv. Sex not known.

✓3119. *Salpinctes obsoletus* ♀ juv. (spec. with short tail.)

3120. *Amphispiza bilineata* ♂ juv. in 1st pl. with parents

3121. *Amphispiza bilineata* ♀ ad. - 140; 205; 60; 60;
cul., 12; gape 13; tars., 19; mtc., 19; claw 5.5.

3122 *Myiarchus cinerascens* ♂ ad.
begin here. 215; 310; 97; 96; nost., 14; gape, 26; tars., 24.5;
nte., 18; cl., 6.

To-day, I saw my first Deer — a ~~doe~~ half-grown fawn
started from under a cedar tree at the head of a deep canon
down which they dashed over loose rocks and gulches, at
incredible speed. I saw them run $\frac{1}{2}$ mile, twice!

July 17th 1884. Fort Verde, Arizona.
3123. *Poliophtila caerulea*. ♂ ad. 118; 160; 49; 49; cul., 8;
gape, 14; tarsus, 17.5; nte., 13; cl., 4.3. Iris hazel.
Bill, black, slightly horn-color at base of mandible.
Tarsi & feet, ~~black~~ dusky plumbeous, the latter flesh-color below;
claws, black.

3124. *Poliophtila caerulea* ♀ ad. 117; 148; 45; 49; cul., 7.5;
gape, 14; tarsus, 17; nte., 12; cl., 3.5. ^{Color of feet as above} Just the above
specimen were, doubtless, a mated pair, as they
were found together in a belt of small
cedar-trees growing a bite ten miles northeast
of the Post. The male sang a very beautiful song.
I had laid down to rest after a hard tramp
in search of Deer, and went to sleep in the shade of
a cedar tree. When I awoke these pretty birds
and the Gray Vireo (*V. vicinior*), Plain Titmouse (*Lophophanes inornatus*), Black-throated Sparrow (*Amphispiza bilineata*) and House Finch (*Carpodacus frontalis*) were
all bustling about me amongst the Cedars
where, before I fell asleep, all had been quiet, and
the only bird seen was a mockingbird (*Mimus polyglottus*) that sat weathercock-wise on the
summit of a cedar, its tail horizontal and
floating in the wind, its body oblique and
heading towards the wind. This is a favorite
and absurd attitude with the moquet.

3125. *Vireo vicinior*, Leconte. Gray Vireo ♀ juv. in 1st plumage,
with its parents, 143; 207; 62; 61; nost., 7; gape, 14;
tars., 19; nte., 13.5; cl., 4. Irides, dark hazel.
Bill with maxilla and tip of mandible, blackish; residue of
mandible, bluish-gray. Tarsi & feet, bluish-gray; claws,
dusky. Found in cedar. Note like a catbird's or other $\frac{1}{2}$ of $\frac{1}{2}$.

3126. *Lophophanes inornatus* ♂ juv. Young of the year
149; 232; 74; 64; cul., 13; gape, 15; tarsus, 22;
nte., 18.5; cl., 6. Iris, hazel. Bill, rusty plumbeous.
Tarsi and feet, plumbeous; claws, dusky.

3127. *Amphispiza bilineata*. ♂ ad. 150; 220; 68; 69;
cul., 12; gape, 12.5; tarsus, 20; nte., 17; cl., 5.
Mourning Dove (*Zenaidura carolinensis*).
Found a nest containing two fresh eggs in
a cedar tree (Nest No. 1. Set 2).

Gibo saw one Deer (*Caprae macrotis*) within
a mile of the Post, in a rocky ravine or canon.

Yesterday (July 16th) I saw a nest of
Hylodan containing small younglings. It was
built under the roof of a large chamber or
in the limestone rock. The old bird evidently
use one particular shelf of the sealing rock for
its rostrum, whereon its excrement had accumulated
in a pile nearly the bulk of a coconut. The pair
of flycatchers (*Sayornis sayi*) at my hospital reared
a brood of young. Then a clutch of eggs was
taken by me, and, now, there are young near,
grown in a third nest. The birds built a new
nest for each brood. The parent was observed, when
foraging for her first brood, to take a piece of
cotton, and cram it into the throat of a young
one — they had left the nest — and when it choked in
trying to swallow this savory morsel, she pulled
it down with her bill. The young sometimes
utter a loud metallic shivering note when
flying which sounds not unlike the noise the
Mourning Dove makes in flying. The old birds,
also, have a curious not musical note which
on rare occasions they utter high up in the air
when the fancy seizes them, and they fly a way
up and descend in a sharp curve uttering this
note in rapid succession, when it has the
effect, and doubtless is intended for a song.

July 18th 1884. Fort Verde, Arizona.
To-day, I rode up Beaver Creek as far as the ponds and ranches, when I was told that Montezuma's Well, a deep pool of large size and unknown depth, having nearly perpendicular walls of several hundred feet in height, and filled with the chambers used as dwellings by the Aztec tribes.

As it was nearly sundown, however, I thought best to visit this wonderful spot at some future time. A settler on one of the ranches told me that the ponds alluded to were inhabited by Ducks, Geese, Waders, and numerous other birds; but I had no time to investigate. He said that Beavers (*Castor fiber canadensis*) were abundant in the creek about his ranch, and that he frequently saw them, and they were of diminutive size compared with the same species in the north. The Creek is here bordered by a wide belt of tule.

Scirpus, and there are numerous "Pokes" as my friend calls them (*Butorides visceros*). I saw one fine old one in a large Sycamore (*Platanus wrightii*).

Chondestes nitens, was occasional all along the road. Gambel's Quail (*Lophortyx gambelii*) were numerous, and several large broods of very small young were found with their parents, but even these little fellows could fly swiftly, and left their parents as soon as alarmed.

Sandwichia haliastur carolinensis. - A bird was seen ten miles up Beaver Creek and a nest was discovered, now deserted by the young, in a dead Sycamore tree.

The sycamores along Beaver are of large size, and in them the Turkey Buzzards build their nests. Sparrow Hawks (*Accipiter* ~~*gambelii*~~ *gambelii*) also breed in them and the young

and old birds were numerous and seen in families.

Corvus carolinensis. An amusing sight was a pair of Ravens, one perched on either post of the gateway at one of the ranches.

Sayornis nigricans. - A brood of young with the parents were found on the Beaver.

V3128. *Ammodramus sparverius*. juv.
270; 580; 188; 135; cul., 4; cal., 11.5; gape, 19.5; tars., 36; mte., 33; claw, 10. Bare skin around eye greenish yellow - cere greenish yellow - bill bluish gray; culmen tipped with black. Tarsi & feet yellow; claws, black. Iris, hazel.

V3129. *Ammodramus sparverius*. juv.
270; 587; 185; 130; cere, 4; cul., 12; gape, 20; tars., 38; mte., 31; cl., 9. Iris, hazel. Bare skin around eye, and cere, greenish yellow. Bill, bluish gray throughout, but slightly darker above at tip. Tarsi & feet pale yellow; claws, black.

V3130. *Otocoris virens longicauda*. juv. in 1st plumage.

3131. *Passerina amoena*. juv. 140; 215; 66; 56; cul., 11; gape, 12; tarsus, 17; mte., 17.5; cl., 5. Iris, hazel. Bill, brown maxilla dark, mandible light. Tarsi, feet & claws, dark brown.

3132. *Coccyzus americanus*. juv. 217; 445; 147; 167; cul., 28.5; gape, 36; tarsus, 29; mte., 29; cl., 8. Bare skin around eye, black; below, blue. Iris, hazel. Bill, with maxilla blackish, broadly edged with gray at base and sides streaked with dull yellow. Mandible orange-yellow, tipped with blackish for 5 mm. space. Tarsi and feet, plumbeous; claws, dusky. His crop contained two large ova, which would have been deposited in a day or two.

V3133. *Icterus cucullatus*. juv. 211; 379; 88; 95; cul., 21; gape, 23; tarsus, 23; mte., 21.5; cl., 6.5. Iris, hazel. Bill, with maxilla glossy black, with a triangular blue patch at on sides of ramus of mandible. Tarsi & feet, plumbeous; claws, brownish-black.

3134. *Tyrannus verticalis* ♂ ad. 230; 404; 123; 101; not., 16; gape, 28; tarsus, 19; mte., 22; cl. 8.
Tachycineta bicolor. - Several of these lovely Swallows were seen far up on Beaver Creek, where suitable nesting sites were abundant.
Buteo ridens virescens. - One fine old bird was seen; and I was told that the species is quite numerous up there, particularly about some ponds and patches of tule along the stream.
Nyctioides grisea naevia. - One Night Heron was seen at the crossing on the Verde, as I rode home at dusk of evening. I see a bird of this species quite frequently about the River near the Post.
Cathartes aura. - Abundant in several localities.

July 19th, 1884. Fort Verde, Arizona.
Tyrannus verticalis. - Several times I have heard a song which seemed to come from this bird, always at evening; but this evening I positively identified the author of the song to be the "Arkansas Traveller," as my wife calls it. The bird sat on a sycamore and in the altitude of a love song gave a loud, shrill impetuous song, which no one could deny having the attributes of melody rhythm + sweetness which constitute a song. The song consists of five notes, always preceded by its usual desyllabic call, twice repeated. It is spirited and sweet.

Ardea herodias. - A young bird recently from the nest was seen today for the first time.
Vireo pusillus, Coes. A nest was found suspended to the low branch of a cottonwood in a thicket. The parent was shot as it left the nest. Nest No. Set 3.

Zenaidura macroura. - A nest (Nest No. Set 2) was found in a cottonwood eight feet from the ground; inside of weeds

- and a few sticks, containing 2 fresh eggs.
 The young are now on wing in many instances.
 ✓ 3135. *Picus scalaris*, Wagl. Texas Sapsucker. ♂ juv. in 1st plumage. 186; 320; 95; 68; cul., 20.5; gape, 22; tarsus, 19.5; mte., 20; cl., 7.5; Irides brown. Bill, black, plumbeous on mandible. Tarsi and feet, greenish-gray; claws, olive at base, shading into dusky at tip.
 ✓ 3136. *Melospiza fasciata fallax*, Baird ♂ juv. in 1st plumage; still with parents. 165; 218; 64; 76; cul., 12; gape, 12.5; tarsus, 23.5; mte., 22; cl., 6. Irides hazel. Bill, with maxilla blackish-brown; mandible, fleshy-brown. Tarsi, feet & claws, ~~dark~~ brown.

July 20th, 1884. Fort Verde, Arizona.

3137. *Cathartes aura* (Linn.) Hlig. Turkey Buzzard. ♂ ad. 600; 1630; 470; 240; cul. 35; gape, 52; tarsus 59; mte. 86; cl. 20; height of bill, 15. Iris, brown. Bill, white. Bare skin of head, purplish-red, with some mottling of whitish and white patch under eye of circular form. Tarsi white, becoming yellowish flesh-color on feet, and olive brown on toes; claws, blackish.
 ✓ 3138. *Lophortyx gambeli*, Nutt. ♂ pullus with parents.
 ✓ 3139. *Lophortyx gambeli*, Nutt. ♂ pullus with parents.
 ✓ 3140. *Lophortyx gambeli*, Nutt. ♀ pullus with parents.

July 21st, 1884. Fort Verde, Arizona.

- ✓ 3141. *Zenaidura macroura* ♂ pullus in nest, on which female was sitting. 142 X 270.
Tyrannus vociferans ♂ ad.
 3142. 225; 417; 132; 102; cul., (about) 21.5; not., 16; gape, 29; tars., 19.5; mte., 22.5; claw 9. Claws black. Iris hazel. Bill black - tarsi & feet plumbeous black.
 3143. *Tyrannus verticalis* ♂ ad. (15) 221; 413; 132; 103; cul., (about) 21.5; not., 16; gape 27.5; tars., 19.5; mte., 22; claw 7.5. Iris hazel. Bill black - tarsi & feet plumbeous black. Claws black. Shipped + No. 3143 were shot in the same tree & both had nests.

- ✓ 3144 *Icterus cucullatus*. ♂ ad. Hooded Oriole.
210:285:89:77: cul., 19.5: gape 22.5;
tarsus, 23: Mtc., 22: claw 6.5. Iris hazel, basal
3145. one half of rami blue - residue of bill, black. tarsi
and feet bluish gray - claws blackish.
- ✓ 3145. *Pyrauga ludoviciana* ♂ juv. probably a bird ^{in its second year}
183:290:91:74: cul., 16: nost., 12: gape 20.5.
tars., 20: Mtc., 20.5: claw 6.
- 3146 *Geothlypis trichas* ♂ ad.
145:188:58:58: nost., 8.5: gape 15: tars., 21:
Mtc., 18.5: claw 5. Iris hazel, bill black, brown-
ish at base of mandible - tarsi, feet & claws
yellowish brown.
- ✓ 3147 *Pipilo aberti* ♀ juv. in first plumage.
239:298:91:139: cul., 16: gape 17:
tars., 30: Mtc., 28: claw 9.5. Iris hazel,
bill with maxilla olive brown - mandible, flesh
color. July 22nd, 1884. Ft. Verde, A.T.
- ✓ 3148 *Catherpes mexicanus* var. *conspersus*. ♀ ad.
145:188:58:52: cul., (about) 20: nost., 15: gape 23:
tars., 18: Mtc., 17: claw, 5.
- ✓ 3149. *Vireo vicinior*. *Cones*. ♂ ad. In worn breeding plumage.
145:210:65:64: nost., 7: gape 13: Tars., 20.5:
Mtc., 15: claw 5.
- 3150 *Mimus polyglottus*. ♂ juv. in full 1st plumage
265:376.
- ✓ 3151. *Lophortyx gambeli* ♂ pullus. Just able to fly.
- ✓ 3152. *Lophortyx gambeli* ♂ pullus. Just able to fly.
- 3152a Lizard with red shoulder stripes. This large
lizard was shot accidentally. I fired at a
Road-runner (*Geococcyx californianus*) behind
a bush and found not the bird, but this Reptile.
Pipilo fuscus mesoleucus. - A family of
these birds was found in a little canon
inhabiting alike the cedar-trees and scrub
oak bushes.
- Aphelocoma woodhousei*. - A single bird
found on a mesa a mile west of Davis's ranch.
This is the first one I have seen in the Valley.

July 23rd, 1884.

Fort Verde, Arizona.

Lieut. Vaggles sent me twelve eggs of the
Canebrake Lizard (*Sceloporus*)
which he dug out of his hole. of them
were preserved in alcohol, the embryos being
considerably advanced in development. Five eggs
of average size measure, respectively, 17.5 X 13.5,
19 X 14; 19 X 15; 18.5 X 14.5; 18 X 15; an exception-
ally small one measures 15 X 12. The shell is
thick, tough, and rough, yielding ^{but not} indenting on
pressure, collapsing when emptied of their contents.
Color, white.

Fig. 1. (3046)

Fig. 2. (3047)

Phainopepla nitens (Sw.) (Ccl. Nos. 3046 & 3047. Fort Verde,
Arizona. June 19th, 1884. Young nestlings, showing
the black skin, covered with white patches of down.
The parents are: No. 3041 ♂ & 3042 ♀.

Note. This species is abroad with its young ^{at this time}
about the time the first spring migrants reach the

- July 23rd, 1884. Fort Verde, Arizona.
- ✓ 3153. *Pyrocephalus rubineus mexicanus*. ♂ ad.
148; 252; 71; 61; cul., 9.5; gape, 18; tars., 16;
mtc., 15; cl., 5.5.
3154. *Tachycineta thalassina* ♀ juv. in 1st plumage,
just from nest in a hole in a willow tree, by
the Verde River. 117 X 263.
- ✓ 3155. *Melospiza fasciata fallax* ♂ juv. in 1st pl.
163 X 215.
3156. *Aluco flammeus americanus* (Aud.) Ridgw.
American Barn Owl. ♀ juv. One of a
nest of five grown young, found in a
large hole in a clay bluff beside the
Verde River. The nest was reached with
some difficulty and danger. The young
Owls hissed in a frightful manner, and
uttered loud shrill cries. One of them was
secured. The rest were left in the bank until
evening in hopes that the old birds might
also be secured; but on visiting the spot
near sundown I had the mortification
to find that the birds had flown, one and all.
I tied the live Owl to my saddle and
rode home. On the way I got off and shot
a Violet-green Swallow, whereupon the owl set
up such a screeching, hissing and flapping
that my horse, Daisy, became perfectly frantic
and at length shook the Owl off. I went to catch
it, when it got up and flew away. I shot it
with No. 5 shot, but it carried the shot a long
way, and I was fortunate to find my bird.
408; 1070; 290; 138; cul., & cere 35; cere 17;
cul., 22; gape 46; tars., 78; mtc., 56; claw 21.
Iris black - cere greenish flesh color - bill flesh
color with dusky markings in side, olivaceous brown.

July 24th, 1884. Fort Verde, Arizona.
Pyrocephalus rubineus mexicanus. - A female
was seen in a large hollow beside the Verde River.

July 25th, 1884. Fort Verde, Arizona.
3157. *Mimus polyglottus* ♂ juv. in 1st plumage.

- July 26th, 1884. Fort Verde, Arizona.
- 113 3157a. Long-eared Bat *Antrozous pallidus* (No. 111) ♀ ad.
3157b. Long-eared Bat " " (No. 112) ♂ juv.
No. 113. The above are a pair of nearly fully grown
young of the year bats, which flew in my Hospital
ward last night. The young are dark in pelage.
- 113 3157c. Long-eared Bat. *Antrozous pallidus* (No. 113) ♀ juv.
3157d. *Pipus callotis texianus*. ♀ ad. Skull.

- ✓ 3158. *Luraea caerulea* ♂ juv. in first plumage.
177; 275; 86; 71; cul., 17; gape, 18.5; tars., 21.5;
mtc., 23.5; cl., 6. Irides, hazel. Bill, olivaceous-
brown. Tarsi & feet, plumbeous; claws, dusky brown.
- ✓ 3159. *Cremophila alpestris* ^{agusta (identified by Wright)} ~~chrysolaema~~ ♂ juv. in 1st pl.
166; 293; 89; 65; not., 9; cul., 13; gape, 16.5;
tars., 23; mtc., 18; cl., 6.5; hind cl., 19.5. Irides,
hazel. Bill with maxilla horn-color at base, becoming
blackish towards tip; mandible flesh-color at base
shading through bluish to blackish at tip. Tarsi and
feet, dusky plumbeous; claws, brownish-black.
3160. *Tyrannus brevipennis* ♀ juv. in 1st plumage.
216; 390; 118; 94; not., 13; gape, 26.5; tarsus, 20;
mtc., 23; cl., 7.

Iris dark hazel - bill black - brownish
at base of mandible, tarsi & feet plumbeous
claws blackish.

3161. *Tyrannus verticalis* ♂ juv. in first plumage.
222; 383; 115; 94; not., 13.5; gape 26;
tars., 20; mtc., 21; claw 6. Bill brownish
black - tarsi & feet plumbeous, claws blackish -
iris hazel.

3162. *Tyrannus verticalis* ♂ ad.
237; 420; 133; 106; not., 14; gape 26.5
tars., 21; mtc., 21.5; claw 8. It was eating a
large Cicada ^{wings and all} when shot, which it managed to
swallow with some difficulty, striking it sideways on a branch -
its beak.

✓3163 *Astragalinus psaltria* ♂ ad.
115; 206; 63; 46; cul, 11; gape 11; tars, 13.5;
Mtc., 15; claw 5. Not skinned.

✓3163. *Carpodacus frontalis* ♂ juv., in 1st plumage.
152 X 255. Irides, dark hazel.

To-day, I went shooting at one o'clock, and found it quite hot although there was a pleasant breeze. The mercury stood at 109° Fahr. in the shade. Climbing was warm work; but I went up a couple of large cottonwoods in search of nests. A nest of *Icterus bullocki*, which contained three eggs on June 21st contained but a single egg, and that contained an embryo so large that I was unable to preserve it, although I brought the nest home. This was a second brood. The nest was first found on _____, when it contained the first brood of young.

Icterus cucullatus. - The Hooded Oriole's nest found with young on the 21st was deserted, and I, therefore brought it home along with a used nest of *Tyrannus* sp. — ?

3163a. *Chamaeleon*. ♂ ad. *Sceloporus*
Total length, 189. Tail from anal orifice, 78;
nose to anal orifice, 111. Arm, 19; forearm, 15;
hand, 2.5. longest cl., 3.5; leg, 2.2; thigh, 2.4;
hind foot, 3.1; longest cl., 4

✓3164. *Pyrocephalus rubinus mexicanus* ♀ ad.
151; 256; 79; 62; nost., 10; gape, 18; tarsus, 17;
mte., 15.5; cl., 5. Iris, hazel. Bill, tarsi and
feet, brownish-black; claws, black.

✓3165. *Pyrocephalus rubinus mexicanus* ♀ ad.
150; 260; 79; 64; nost., 10; gape, 18; tarsus 16;
mte., 15; cl., 5.5. Colors as above.

3166. *Empidonax pusillus* ♂ ad.
145; 215; 67; 62; nost., 10; gape, 18.5;
tarsus, 16; mte., 14; cl., 5. Irides, hazel.
Bill with maxilla blackish-brown; mandible pale.

✓3167. *Icterus virens longicauda* ♂ juv. just from nest.
No yellow whatever.

✓3168. *Empidonax alpestris adusta* (identified by Dainton) ♂ juv.
166; 312; 99; 65; cul., 13; nost., 9.5; gape 16.5;
tars., 22; mte., 18; claw 6.5. Iris hazel - bill
horn color at base - then bluish shading into
blackish at tip. Tarsi, feet & claws dull plumbeous.

3169. *Tyrannus verticalis* ♀ ad.
218; 390; 121; 93; nost., 14; gape 26; tars., 19;
mte., 22; claw 8. Iris hazel. Bill black-brown-
ish at base of mandible - tarsi and feet plumbeous
black, claws black.

3170. *Tyrannus vociferans* ♂ ad.
240; 406; 121; 103; nost., 17.5; cul., 24; gape 29;
tar., 20; mte., 22; claw 8. Iris hazel - bill black
tarsi and feet dusky plumbeous - claws black.

July 29th, 1884. Fort Verde, A.T.
✓3171. *Helminthophaga luciae* ♀ juv. in 1st plumage
103 X 175.

3171a. *Empidonax pusillus*. - (This specimen was not
skinned as its head was shot off entirely and
I only preserve it temporarily until a good
specimen can be taken.) ♀ juv. in 1st plumage.
Uttered a note like that of the Blue Grosbeak,
but weaker.

✓3172. *Vireo pusillus*. ♀ ad. Moulting. Patch of bright feathers
in back. 127; 183; 56; 53; nost., 8; gape, 14.5;
tarsus, 19.5; mte., 15; cl., 5.

✓3173. *Pipilo aberti*. ♂ juv. Bird of the year.
235; 285; 89; 120; cul. 16; gape, 17; tars., 29;
mte., 27; cl., 9. Iris, brown. Bill with maxilla
and tip of mandible
dusky olivaceous-brown; residue of mandible,
purplish flesh-color. Tarsi, feet and claws,
purplish-brown.
There are indistinct stripes on feathers
of breast. See Ridgw. (B.N.A.C., p.).

- ✓ 174. *Corvus corax carinivorus* 2 juv. in 1st plumage
610: 1210: 395: 260: cul., 65: ^{not} gape 43:
gape 72: tars., 63: Mtc., 63: claw 20.
Iris hazel - bill, tarsi & feet black - claws black.
- ✓ 3175 *Lophortyx gambeli*, Nutt. ♂ ad. Moulting, but
wing and tail in good condition.
280: 365: 110: 98: cul., 11: not., 8: gape 12.5:
tars., 33: Mtc 39: claw 10.

July 31st, 1884. Fort Verde, A.T.

3176. *Buteo swainsoni* ♀ acquiring the adult plumage.
540: 1340: 405: 225: cul. & cere, 36: cer., 12.5:
cul. fr. cer., 24: gape, 42: tars., 73: mtc., 60:
cl., 20.5. Iris, hazel. Cere, bright, slightly
greenish yellow. Base of bill, greenish-yellow.
Bill, bluish at base of both mandibles shading
into blue-black towards tip. Tarsi and
feet, lemon-yellow. claws, black. This bird
is in transition plumage, and moulting.
Stomach contained hair and flesh of *Lepus sylvaticus*
arizonae, and beak & claws were covered with blood hairs.
- Chondestes grammacus*. - These birds are
now forming flocks again as are the
Shore Larks (*Eremophila alpestris*).
- Guiraca caerulea*. - Still in full song.
- Dendroica aestiva*. - Occasionally, but not
frequently heard singing.
- Carpodacus frontalis*. - Rarely heard ^{singing} lately.
- Xanthocephalus icterocephalus*. - A single
female was seen in the cottonwood in our
back yard; the first seen since spring.

- August 2nd, 1884. Ft. Verde, A.T.
✓ 3177. *Sayornis nigricans* ♂ juv. Young of the year.
187: 280: 91: 82: not., 11: gape, 20: tarsus, 18:
mtc., 16: cl. 5.5: Iris, hazel. Bill, black, yellowish
at corner of mouth and at base of mandible. Tarsi
and feet, black; claws, black. It was alone and
able to take care of itself.

August 3rd and 4th, 1884.
Fort Verde, A.T.

As I traversed the same ground both
days, I will write up the ornithological
data together. I was sent for on the night
or early morning, rather, of the 3rd, to visit a
Mr. Kay at the Conger Mine, twelve miles
from the Post, northwest, among the foothills.
On my return trip, I had to ride six
miles down the Valley to see patients in
the ranches, making altogether 36 miles in
the saddle. On the 4th I covered the
same ground (36 miles), visiting the same patients.
The following birds were seen:

Mimus polyglottus. - Everywhere abundant. Usually
found in families, the young uttering an asthmatic
note similar to that of the *Ampelis cedrorum*.

Harporhynchus crissalis. - A few seen in bushy
canyons. Have not heard it singing lately.

Salpinctes obsoletus. - Several were seen in
the mud walls of little canyons up the River, and
upon the rocks near the Conger Mine.

Eremophila alpestris. - On all
the level prairies these birds were seen, sometimes
singly or in pairs, sometimes in families or in
large flocks. Some were seen that had apparently
just left the nest, but the majority were strong on wing.

Helminthophaga luciae. - Several were seen down
the Valley in the Verde bottom among the mesquites.

Dendroica aestiva. - Abundant everywhere, but
not heard singing.

Icteria virens longicauda. - Abundant in the mesquites and cottonwoods in the Verde bottom. The young utter a clucking note like the Eastern House Wren's.

Heirundo erythrogastra. - A few seen in the vicinity of the Post.

Petrochelidon lunifrons. - Abundant.

Stelgidopteryx serripennis. - Several seen on the Verde at Blackford's ford.

Phainopepla nitens. - Several were seen high up in the foothills at the Conger Mine. ^{Family of newly fledged young seen in the Verde bottom.}
Orio pusillus. - Common in the Verde Valley, still singing sweetly.

Lanius ludovicianus excubitorides. - There were several families of young birds in the mesquites down the Valley, and they were occasionally seen in the foothills.

Carpodacus frontalis. - A few families seen in the cottonwood hedges at the ranches down the Verde. I did not hear the males singing. They do not sing about our quarters now. They were last heard a week ago.

Astragalinus psaltria. - A large flock is always present among some tall sunflowers down the Valley beside the River. Their loud call notes and song were heard both days.

Melospiza fasciata. - Singing beside the Verde.

Anaphis spizella atrigularis. - A bird, resembling those of this genus (*Anaphis*) was seen both days among the scrub oaks near the Conger Mine.

Amphispiza bilineata. - Everywhere abundant, and singing.

Chondestes grammacus. - Plentiful.

Pipilo maculatus megalonyx. - Common upon the oak-clad hillsides about the Conger mine, inhabiting especially the ravines. Utters a note like the Catbird's, and singing its pleasant song.

Pipilo fuscus mesoleucus. - A family of young birds with their parents were seen in

a ravine at the Conger Mine.

Pipilo aberti. - Common in the Verde bottom.

Sturnella neglecta. - Several seen in the prairie up the River on both days. Singing.

Icterus parisorum. - An adult male was seen in the oak bushes at the Conger mine ^{on the 3rd}, and a female or young near the same spot on the 4th. A nest was found in a tall bush resembling in foliage the Magnolia, near the Conger Mine, built of woven grasses softly lined. The nest was dependant but extremely shallow, otherwise resembling the nest of *Icterus cucullatus*, a species which I have never seen to inhabit the hills; but this nest hardly agrees with those described as those of *Icterus parisorum*. The nest was only 5 feet from the ground.

Icterus bullocki. - A few young seen in the mesquite bushes near the Post.

Icterus cucullatus. - An entire family was seen both days inhabiting the mesquite bushes and cottonwood hedge beside a ranch down the Verde River. The male was an especially fine bird, and uttered a loud call note resembling that of *Icterus spurius*, its nearest relative in the East.

Corvus corax. - These birds are usually shy in this quarter, but I rode within a few feet of several that were feeding off at the butcher's corral near the Post.

Apelocoma woodhousei. - Very plentiful about the Conger Mine, inhabiting the oak bushes clothing the foothills. The young were in families with their parents. They exhibited the inascibility of their parents; flying to a bush near me one would scream at me, then poke its bill into the bush and utter another terrific yell and then drop into the interior of the bush and utter a queer ^{variety} series of notes.

Tyrannus verticalis. - Frequently seen in the Verde bottom. Indeed, so far as I can see, any difference in habitat between this species and *T. vociferans*, it consists in the more elevated habitat of the latter, although both species are often seen together in the Valley.

Tyrannus vociferans. - This bird has many notes. Its commonest call-note resembles the chip-churr of the *Pyrranga rubra* somewhat, although louder & more forcibly given. The species was found in some numbers among the foothills at the Conger Mine, inhabiting in families the scattered cedars here and there seen among the oak and other shrubbery.

Myiarchus cinerascens. - A few seen of the plains among the mesquite bushes.

Sayornis sayi. - Common about the Post. Still breeding. A few seen upon the mesquite plains.

Sayornis nigricans. - A few seen beside the Verde River. Have never seen it away from water. In this respect it differs from *S. sayi* which often inhabits high dry mesas and builds its nest in the ^{dry} rocky cañons far from water.

Empidonax traillii pusillus. - Only found in the willows, cottonwoods, etc., beside the Verde.

Chordeiles acutifemur texensis. - Seen in considerable numbers every evening. They begin flying before sundown. Riding along in the dusk, one often hears their very singular babbling ^{uttered when} upon the ground.

Coccyzus americanus. - A family of young and old seen among the mesquites down the Valley. The species is abundant in the Valley.

Picus scalaris. - A few seen and heard in the cottonwood hedges and mesquite bushes in the River bottom.

Zenaidura macroura. - Several seen in the Verde Valley.

Speotyto cunicularia hypogaea. - A family of six or eight was seen both mornings on a mesa about five miles up the Valley and a mile west of the river. They all sat upon the ground around their burrow save one which sat on a mesquite bush a couple or three feet from the ground. All uttered a singular note and flew away from the spot and alighted upon the ground at a distance. After much soaring about in irregular circles. These are the only burrowing Owls I ever saw alive.

Accipiter fuscus. - One seen on the 3rd.

Linunculus spiarvernis. - Abundant everywhere from River bottom to the mts.

Buteo calurus. - A number seen.

Buteo swainsoni. - Several seen.

Cathartus aura. - Abundant everywhere.

Two were soaring over the prairie grass and once alighted not two rods in front of my horse on a gallop. and sat there until I was within a few feet.

Zenaidura carolinensis. - A few are still sitting on their eggs. Large numbers of young are on wing, and I saw flocks of hundreds among the tall sunflowers beside the Verde River. They are found everywhere where a drop of water can be had.

Lophortyx gambeli. - Some very small young were seen. Many other flocks were seen which were nearly as large as adults. All ages were noted. One flock was seen upon an open mesa. The birds were running toward cover. There appeared to be at least two hundred in the flock. An archer down the Valley shot 15 good sized birds at one shot. The cry of the young is unlike any other note of the species.

Zus canadensis. Saw the wing of one killed at the Conger mill on the Verde River.
Ammodramus macularius. - A few seen on the Verde.
Ardea herodias. - Several young seen on the Verde.
Geococcyx californianus. - One seen down the Valley.
 August 6th 1884 Fort Verde, Arizona.

3178. *Spizella atrigularis* ♂.
 Shot among the scrub oaks at the Conger Mine.
 153; 209; 63; 75; cul., 10; gape 11; tars., 21;
 Mte., 19.5; claw 5.5. Bill reddish brown
 faintly tipped with blackish on maxilla.
 Tarsi & feet dusky brown claws blackish.

3179. *Peucaea ruficeps boucardi* ♂ ad.
 172; 222; 67; 77; cul., 13; gape 13.5; tars., 22.5;
 Mte., 21.5; claw 6. Iris hazel - maxilla dusky
 brown, mandible & lower border of maxilla flesh color
 a base shading into plumbeous at tip. Tarsi flesh color
 feet brownish flesh color, claws brown.

3180. *Speotyto cunicularia hypogaea*. ♂
 240; 610; 173; 88; cul. & cere, 20; cere 8.5;
 cul., 13; tars., 47; Mte., 28; claw 10.5. Iris bright
 yellow; bill & cere ^{pale} greenish; - base part of tarsi &
 toes greenish flesh color with dusky scales
 claws black. gape, 23. Stomach contained insects (grasshopper)

3181. *Speotyto cunicularia hypogaea*. ♂
 250; 630; 180; 92; cul. & cere, 19; cere, 8;
 cul., 14; gape 22; tars., 50; Mte., 30; cl., 11
 Colors as above. Stomach contained grasshopper & other insects.
 To-day I visited the Conger Mine again. On the prairie
 at the base of the foothills I saw a number of
 Western Meadow Larks (*Sturnella neglecta*).

Shore Larks (*Eremophila alpestris*) were
 seen in large flocks; chiefly young birds.

Upon the oak-covered mesa I found the
 following species

Aphelocoma woodhousei. - Numerous.

Amphispiza bilineata. - A few families seen, not
 as plentiful as in the Verde bottom.

Spizella atrigularis. - One or two families found
 in a little cañon among the oaks. The specimen
 shot was a male and apparently adult, although

the black on head was confined to a patch on
 the throat.

Peucaea ruficeps boucardi. This species is
 rather numerous in families of young and parents.
 Its alarm note is like the common call note of
 the Eastern Song Sparrow but louder and sharper,
 being intermediate between that and the note of the
 Eastern Fox Sparrow. It has a curious chattering
 note beside. It is not remarkably shy, and
 often alights on the summit of the oak bushes
 (which so far as my observations go it exclusively
 inhabits) and surveys intruders upon its domain.

Pipilo maculatus megalonyx. - Family groups
 of this species were numerous among the small
 rocky cañons, the old males in full song.

Pipilo fuscus mesoleucus. - Several families of
 young birds and their parents seen in the
 wooded ravines in the hills. They are very
 shy and skulk shyly in the brushwood like
 mice. The old birds were occasionally heard
 to utter their curious song.

Trochilus alexandri. - One female seen.

Icterus parisorum. - A pair of adult birds
 and young were seen in the oaks and
 "magnolias" of a ravine in the hills.

Pyrranga ludoviciana. - A male and female
 were seen near the Scott's Orioles.

Geothlypis trichas. - Several were seen
 close to the Conger Mine, well up the mountainside.

Mimus polyglottus. - This species is omnipresent.

Salpinctes obsoletus. - A few in the cañons.

Lophortyx gambeli. - Very numerous in large
 flocks near the mine and everywhere else.

Zenaidura macroura. - Several noted high
 up in the hills.

Thryomanes bewickii. - Seen in the vicinity
 of the Conger Mines and lower down.

Tamias asiaticus dorsalis. - A small striped
 squirrel was seen near the Conger mine supposed to be the
 same as the species found at Whipple Barracks.

August 8th, 1884. Ft. Verde, Arizona.

3182. *Euspiza americana* ? ad.
161: 245: 76: 65: cul., 14: gape 16.5: tars., 22;
Mtc., 23: claw 6. Iris hazel - maxilla dull tip of
mandible dark brown, base of mandible pink
sides of mandible bluish. Tarsi & feet plum-
beous brown - pale purplish.

3183. *Passerina amana* ♀ ad.
136: 216: 66: 57: cul., 10.5: gape 12: tars., 16.5;
Mtc., 17: claw 5. Iris hazel, bill with maxilla
dusky brown - mandible plumbeous - tarsi, feet &
claws dusky plumbeous.

3184 *Passerina amana* - ? juv.
130: 208: Bill with maxilla dusky brown
bordered at base with yellowish white - mandible
fleshy brown - tarsi & feet like above but tinged
with purple. ^{Offspring} of 3183.

3185. *Oxyechus vociferus*, ♀ juv.
278: 520. Bill black a small patch of
orange on sides of mandible at base - eyelid orange
red. Iris hazel - bare part of tibia - tarsi &
feet flesh color tinged with greenish on
tibia bluish on joints & orange yellow on feet.
Claws black

3186. *Picus scalaris* ♂ (ad.?) Moulting.
194: 344: 105: 71: cul., 24: gape, 26: tarsus,
19.5: mtc., 21: cl., 9. Not skinned.

3187. *Guiraca caerulea*, ♂ ad. 186: 288: 90: 76;
cul., 17: gape, 17.5: tars., 22: mtc., 22: cl., 7.

3188. *Astragalinus psaltria arizonae*. ♂ ad.
118: 197: 64: 47: cul., 10: gape, 10: tars., 13;
mtc., 14.5: cl., 4.5.

3189. *Dendroica aestiva* ♂ juv. Young of the year
3188 130 X 193. Stomach below just showing.

August 9th, 1884. Hudson's Rancho on
Ash Creek, A. T. to Fort Verde, A. T. (Distance 20 miles).

Was ordered to Hudson's last night
at eleven o'clock to see a soldier that had been
kicked and dangerously injured by a mule.
I reached my patient at 3 o'clock A.M. after
four hours hard riding in the saddle. We
left there with the wounded man in an
ambulance shortly after daylight. Dozens
of both species of Rabbits (*Lepus sylvaticus*
arizonae et *L. collotis texianus*) were seen.
The latter species was often noticed lying upon
the ground stretched at full length upon its
side, its head held up and ears erect looking
at the vehicle from behind an oak bush. This
is their favorite resting position. I once caught
one lying flat upon its side fast asleep. At
the time I supposed it to have been sick; as I
had never seen, much less caught, one in that
position before; but its vigorous kicking and
squealing soon convinced me that its illness
was transient.

Everywhere Gambel's Quail (*Lophortyx gambeli*)
was seen with its young which are younger
than most of those seen down in the Verde
Valley. When seen in the open spaces, I
noted that one female usually led from a
dozen to twenty little ones. The male bird
also accompanies the young.

Peucaea - This sparrow was
occasionally seen amongst the oak bushes.
I also thought I saw Black-chinned Sparrows.

Pipilo fuscus mesoleucus. - A number were
seen usually in little cañons where a few
cedars grow with the scrub oaks.

Pipilo maculatus megalonyx - Was every-
where plentiful and vociferous.

Harporhynchus crissalis. - Occasional
upon the highest ground amongst the

scrub oaks as well as in the Verde Valley amongst the mesquites. When making long flights it often sets its wings and soars like Gambel's Quail. The young are much darker than their parents which are much bleached.

Turkey Buzzards, Park Finches, Black-throated Sparrows, Woodhouse's Jays, and Mockingbirds were all plentiful.

The large Gray Spermophile (*Spermophilus grammurus*) was seen occasionally in the top of a scrub oak bush; doubtless eating acorns. In Copper Cañon they were numerous and often seen perched on the highest point of some rocky pinnacle. In the Cañon I saw *Salpinctes obsoletus* near the top, where our break broke and the driver being somewhat under the influence of liquor, I had enough to do to keep my seat upon the ambulance which dashed down the entire length of Copper Cañon at a reckless headlong speed, the driver whipping the four mules to keep them a head of the ambulance. We descended from a vertical height of 1700 feet, at this furious pace, to the Verde bottom, where the driver pulled up his mules to take account of stock. Our poor wounded soldier was nearly dead. He asked for whiskey and arranged his bed and got into shape for the home stretch, and I soon had him comfortably ensconced in my hospital. I shall never forget that furious ride down Copper Cañon!

Not far from the head of the Cañon I saw a large (chiefly) green sizzard, like those found on the Ash Fork road near Baughart's rancho.

Capt. Russell tells me that a large brilliant green sizzard lives in abundance in the Red Rock country up the Verde River.

- 3188 a ~~Antrozous pallidus~~ Long-eared Bat. *Antrozous pallidus*. ♂ ad. Total length, 120.
No. 114. Extent, 372; nose to eye, 8; ear, 19; occiput, 23; root of tail, 68; Tail, from root to end of vertebrae, 52; Ear, height, 29; width, 21; Wing from carpal joint, 93; Fore-arm, 55; leg, 22; hind-foot, 12; its longest claw, 3; alar toe + claw, 10; cl., 3.
3188 b ~~Little Bat~~ Myotis yumanensis. ♂ ad. Total length, 77; extent, 223; No. 115. nose to eye, 6; ear, 10.5; occiput, 15; root of tail, 42; Tail from root to end of vertebrae, 35; Ear, height, 13; width, 7; Wing from carpal joint, 55; Alar toe + claw, 5.5; cl., 2; fore-arm, 34; leg, 15; hind-foot + cl., 9; claw, 1.5.

August 10th, 1884. Fort Verde, Arizona.

- 3188 a Long-eared Bat. *Antrozous pallidus*. ♂ ad.
No. 114. Total length, 120; extent, 372; nose to eye, 8; to ear, 19; to occiput, 23; root of tail, 68; Tail, from root to end of vertebrae, 52; Ear, height, 29; width, 21; Wing from carpal joint, 93; Fore-arm, 55; leg, 22; hind-foot, 12; its longest claw, 3; alar toe + its claw, 10; claw, 3.
3188 b Little Bat. *Myotis yumanensis*. ♂ (ad.).
No. 115. Total length, 77; extent, 223. Nose to eye, 6; ear, 10.5; occiput, 15; root of tail, 42. Tail, from root to end of vertebrae, 35. Ear, height, 13; width, 7. Wing, from carpal joint, 55; Alar toe + claw, 5.5; claw, 2. Fore-arm, 34. Leg, 15. Hind-foot + cl., 9; claw, 1.5.

August 12th, 1884. Ft. Verde, Arizona.

- 3188 c Long-eared Bat. *Antrozous pallidus*. ♂ ad.
No. 116. Total length, 118; extent, 350. Nose to eye, 9; ear, 17; occiput, 22; root of tail, 67. Tail, from root to end of vertebrae, 51. Ear, height, 29; width, 21.5. Wing, from carpal joint, 86. Alar toe + claw, 10; cl. 3. Forearm, 51. Leg, 22; hind-foot + cl., 13.5; cl. 3.
3188 d Long-eared Bat. *Antrozous pallidus*. ♂ ad.
No. 117. Total length, 115; extent, 357. Nose to eye, 9; ear, 16; occiput, 22; root of tail, 65. Tail from root to end of vertebrae, 50. Ear, height, 28; width, 22.5.

- Wing from carpal joint, 93. Alar toe + claw, 10; claw, 3. Fore-arm, 54. Leg, 33. Hind-foot + cl., 12; claw, 3.
- ✓3189. *Lophortyx gambeli*, Nutt. ♀ juv. Shot in the top of a mesquite bush where they flew for safety. When flushed: 115 X 195.
- ✓3190. *Lophortyx gambeli*, Nuttall. ♂ juv. Killed at same shot with above specimen (no. 3189). 127 X 210.
- ✓3191. *Lophortyx gambeli*, ♂ juv. Still in flock with parents.

3192. *Steganopus wilsoni*. ♀ (juv?) Probably in first plumage. Phalarope. This bird was feeding alone upon the sandy margin of the Verde River. When I fired at it, uttering a plaintive whistle not unlike the Killdeer's and soon dropped dead upon the middle of the River and floated down stream until it lodged upon a pebbly island, where I had prepared to swim out after it, when a sudden sand storm and high wind struck us and carried my bird out into the channel. It floated down stream a good way before I caught up with it in my bare feet. The flying sand cut my bare skin and the wind blew away my trousers, so that I could not dress until the storm in a measure abated.

237; 435; 134; 60; cul., 33; gape, 37; tars., 36; bare part of tibia, 20; mte., 32; cl., 5.6. Irides, dark hazel. Bill, black. Base of tibiae and tarsi, dusky, greenish, orange-yellow. Feet, dusky orange above; bright orange below; claws, black. The bones were hard and ovary well developed.

August 13th 1884. Fort Verde, Arizona.

- ✓3193. *Pyrocephalus rubinus mexicanus* ♂ ad. This specimen is moulting, but the old terminal rectrices & remiges are left, and hence the measurements are accurate. Plumage strongly tinged with yellow in the red. Irides, dark brown. Bill, tarsi and feet, brownish-black; claws, black.

- 155; 263; 80; 63; cul., 14; mte., 9; gape, 18; tars., 17; mte., 16; claw, 6.
- ✓3194. *Pyrocephalus rubinus mexicanus* ♂ juv. 150; 261; 79; 62; cul., 14; mte., 9; gape, 18; tars., 17; mte., 15; claw, 5. Iris hazel, bill brownish black, tarsi & feet blackish, claws black. Sides of chest, lining of wings & flanks pale sulphur yellow, similar indistinct coloring on rump.
3195. *Empidonax obscurus* ♀ ad. 148; 223; 66; 61; cul., 14.5; mte., 9.5; gape, 19; tars., 18; mte., 13.5; claw 5. Iris hazel, bill with maxilla black - basal half of mandible yellowish the residue brownish black - tarsi, feet & claws black.
3196. *Passerina amoena* (Say) Gray juv. 136; 220; 70; 57; cul., 10.5; gape 12; tars., 17.5; mte., 17; claw 6. Iris hazel, bill olive brown tarsi & feet plumbeous brown. Claws light brown.
- ✓3197. *Tringoides macularius* juv. 190; 334; 104; 56; cul., 21; gape 23; bare part of tibia 10; tars., 22; mte., 22; claw 3.5. Bill with maxilla black - mandible greenish at base shading into black towards tip, bare part of tibia, tarsi & feet yellowish olive - claws black. Iris hazel.
- ✓3198. *Oxyechus vociferus* 275; 505; Not skinned.
- ✓3198. *Oxyechus vociferus* 288; 525; 168; 132 (to end of elongated middle feather) cul., 19; gape 23; bare part of tibia 19; tars., 37; mte., 25; claw 6.
3199. *Buteo swainsoni* ♂ juv. 490; 1250; 390; 220; cul. & cere 30; cere 12; cul., 20; gape 37; tars., 68; mte., 54; claw 18. Iris hazel, cere & skin along gape, pale yellowish green, bill bluish horn color at base of mandible & at lower angle at base of maxilla, residue blackish, claws black. Bare part of tarsi & feet pale lemon yellow. See note over the page.

August 15th 1884. Ft. Verde, Arizona.

- ~~32049.~~ Little Short-eared Bat. *Myotis lucifugus longicus* ^{Pad.}
No. 118. Total length, 94; extent, 230; nose to eye, 7.5; ear, 12.5; occiput, 17; root of tail, 54. Tail, from root to end of vertebrae, 40; Ear, height, 14; width, 9.5; Wing, from carpal joint, 60. Alar ~~to~~ + cl., 5; cl., 1.5; Forearm, 36; Leg, 16.5; Hind-foot + cl., 8.5; cl., 1.5.
Note. - On August 8th I saw three Snipes which I thought were *Totanus solitarius*. I have seen them every day since, that I have been along the River. Yesterday, I saw but one.

August 16th 1884. Fort Verde, Arizona.

3205. *Trochilus alexandri*. ♂ ad.
100; 116; 45; 31; cul. fr. feathers, 18; gape, 23; tarsus, 4.5; mte., 7; cl., 3.
3206. *Trochilus alexandri*. ♂ ad.
99; 112; 43; 30; cul. fr. feathers, 18.5; gape, 23; tarsus, 4.8; mte., 7; cl., 3.2.
3207. *Trochilus alexandri*. ♂ ad.
96; 110; 41; 29; cul. fr. feathers, 18; gape, 23; tarsus, 4.5; mte., 7; claw, 3.
3208. *Selasphorus rufus*. ♂
98; 110; 43; 30; cul., fr. feathers, 18; gape, 22; tarsus, 4.5; mte., 7; claw 3.
Selasphorus rufus
3209. 98; 117; 45; 29; cul., fr. feathers, 18; gape 23; tars., 5; mte., 7; claw 3.
3210. *Selasphorus calliope*. ♂ juv.
86; 108; 43; 25; cul. fr. feathers, 14.5; gape 18.5; tars., 4.5; mte., 6.5; claw 2.5.
3211. *Selasphorus platycircus*. ♂ juv.
102; 118; 45; 30; cul. fr. feathers, 18; gape 23; tars., 5; mte., 7.5; claw 3.
3212. *Selasphorus calliope*. ♀
87; 108; 43; 27; cul. fr. feathers 15; gape 19; tars., 4; mte., 6.5; claw 3.

3213. *Buteo swainsoni* ♂ juv. Just from nest.
480; 1150; 365; 210; cul. + cere, 30; cere 13; cul., 19.5; gape, 41; tars., 66; mte., 53; claw 18.
Colors same as 3199.

3214. *Buteo swainsoni*. ♀ juv. Just from nest.
480; 1180; 370; 220; cul. + cere, 31; cere 15; cul., 19; gape 37; tars., 65; mte., 53; claw 19.
Colors same as above.

- ~~32149.~~ *Spermophilus grammurus*. ^{Pad.}
119. Rock Squirrel. Nose to eye, 27; ear, 55; occiput, 67; root of tail, 265. Ear, height, 27; width, 20. Pelvican outstretched fore-foot, 270. Arm, 41; fore-arm, 44; longest claw, 10; Leg, 58; hind-foot, 51; longest claw, 9.5. Tail from root to end of vertebrae, 205; hairs, 250.
Total length, 510.

Nose to outstretched hind foot, 383.
Mammage 10. Shot in a mesquite bush in the Verde bottom at the root of which was its hole. Its pouch was filled with kernels of the Mesquite.

- ~~32144.~~ *Castor fiber canadensis pondator*. Beaver. ♂ ad.
120. Total length 1120. Nose to eye, 67; ear, 140; occiput, 161; root of tail, 825. Ear, height, 40 (to end of hairs, 48); width, 47. Arm, 90; fore-arm from joint, 100; from elbow, 118. Fore-foot, 73; longest claw, 27. Distance between outstretched fore feet, 540. Leg, 173; hind-foot, 143; longest claw, 27. Tail measured from hairs 275; from anus, 360; width, 125. Upper incisor teeth, length from gums, 27. Lower incisors, length from gums, 39. Width of each upper incisor, 9; of both together at apex, 18; at base, 21.5. Width of each lower incisor, 9; of both together at apex, 18; at base, 20. Width of outstretched hind-foot, 170. Claws of fore-foot: 1st = 20; 2nd = 22; 3rd = 22; 4th = 25; 5th = 18. Claws of hind-foot: 1st = 19; 2nd = 21; 3rd = 27; 4th = 26; 5th = 18.

I saw this Beaver a good way above me, in the Verde River, about three (3) miles above the

Post, floating like a piece of drift-wood, low in the water. For some time I was uncertain as to whether it was an animal or otherwise; but I soon saw it move its head up and down slightly, and then I felt sure that it was a Beaver - the first one I ever saw! Every walk I ^{have} taken along the banks of the Verde River has shown me the evidences of the abundance and ~~plentiful~~ industry of this singular beast. Large Cottonwood trees will be seen half gnawed down one day, and on the next occasion that I visit the spot the tree is seen prostrate. Large numbers of Cottonwoods have been cut down by them during the past two months; and in some places every tree near the water and some good-sized ones at quite a distance has been cut, and the spot looks like a clearing made by the woodman's ax. The saplings are frequently dragged to form a large bonfire beside the river bank, in doing which, well made paths are swept in the sand and clay. I have not seen any typical Beaver-dams yet, although the remains of several old ones are situated near the Post. Notwithstanding the plentitude of evidences of Beavers, I have not seen a single one before this, although I have forded the River at night and in the evening, many times. I may as well note that to-day was dark and I had just been ducked by a heavy rain before I saw the Beaver floating up the River. He soon began to swim slowly down the channel. I was concealed behind some debris in a small willow-tree, and awaited his approach with my gun at my shoulder. When he got nearly opposite, I fired my heaviest charge of shot at the ~~top~~ top of his head which was all that was visible above the water; but

a fortunate shot struck his eye, and penetrated ~~into~~ brain. It floundered for a moment, and then dived and tried hard to remain under water, but became exhausted and crawled out of the channel upon the ~~shallow~~ sand-flat on the opposite side where the water was shallow, and, before it could get in deep water again I shot it again. It stopped and hunched up its back and showed its strong brown ivorys ^{teeth}, and, having no more large shot, I seized the opportunity to rush across the channel, and gave the Beaver a tremendous whack across the back with my gun-barrel, crushing the vertebrae and "laying him out". It was so large and heavy that I was barely able to carry him to the bank and tie him up to a "box elder" tree on the shore ~~where~~ so that his tail cleared the ground. Then I rode home, having no way of carrying the beast in to the Post, and returned after dinner on "Sally" my white mare, with a sack, and packed in my first Beaver, which, from the dimensions given will be seen to be an extraordinarily large and old specimen.

Buteo swainsoni. - The two young Buteos were screaming (whistling) in a large Cottonwood across the Verde. As I felt certain they would allow me to get near enough for a good shot, I did not hesitate to wade across the River and get my boots filled with water. They whistled loudly, evidently calling for food. I shot one, and the other sat ^{calmly} upon the limb from which its companion had just tumbled, and soon shared its fate. The parents soon came about the spot, at first soaring at a great height and both uttering a loud quavering cry. The female kept ascending and circling nearer the tree until I thought I could

hit her, which I probably did. After my shot she flew low straight away and alighted on a bush; but soon she began soaring around with her mate, but they did not come near the tree again.

The two species of Humming birds (*Trochilus alexandri* and *Elasphorus*) were feeding exclusively about some tall yellow flowers, on herbaceous, branching stalks and bearing whorled leaves which resembled *Sesuvium* to which family the plant may belong.

The hummers were so numerous that I shot ten in one spot. Both species uttered a loud squeaking note, and one uttered a succession of notes which might be called a song. I could not see which species it was as both were numerous and constantly dancing about the yellow bushes, with much whirring and fighting. One came and hovered within six inches of my nose for several seconds while I was picking up a dead bird in the center of the bushes. Up to this time I have not seen Humming birds in any numbers.

August 18th, 1884. Ft. Verde, Arizona

3215. *Ardea herodias* juv.
Length to end of claws, 1520; 1185; 1820; 440;
1810; culmen, 135; gape, 175; bare part of tibia,
130; tarsus, 189; Mtc., 121; claw 15.
Iris yellow next to pupil, shading
outwards to red. Bill with maxilla & upper edge
of mandible blackish - ~~the~~ yellowish patches be-
low nostrils - residue of mandible greenish yellow.
Bare part of tibia greenish gray. Tarsi feet &
claw blackish. Under part of feet clear flesh
color showing a sharp line of demarcation
between the black dorsal and flesh-colored
ventral surfaces of feet. Stomach contained in-
bolice of fish-bones and scales and thin bones of frogs.

3216

3216. *Trochilus alexandri*. ♂ ad.
97:113:44:29: cul., from feathers 19; gape 23;
tars., 4.5; Mtc., 6.5; claw, 3.

3217

3217. *Trochilus alexandri*. ♂ ad.
98:113:44:29: cul., from feathers 19; gape 23.5;
tars., 4.2; Mtc., 6.5; claw 3.

3218

3218. *Trochilus alexandri* ♂ ad.
101.5:115:44:30: cul., from feathers 19; gape 23;
tars., 4.5; Mtc., 7; claw 3.

3219

3219. *Trochilus alexandri* ♂ ad.
99:104:43:30: cul., from feathers 20; gape 24;
tars., 4.5; Mtc., 7; claw 3. Iris dark hazel - all
feet & claws black. 3216 to 3219 color the same.

3220

3220. *Elasphorus rufus*. ♂
95:110:43:28: cul., from feathers, 16; gape 21;
tars., 5; Mtc., 8; claw 3.

3221

3221. *Elasphorus rufus*. ♂
95:110:42:29.5: cul., from feathers 16; gape 21;
tars., 5; Mtc., 8; claw 3.

3222

3222. *Elasphorus rufus*. ♂
96:115:44.5:30.5: cul., from feathers 18;
gape 22.5; tars., 5; Mtc., 8; claw 3.5.

3223

3223. *Elasphorus platycercus*. ♀
97:117:45:30: cul., from feathers, 18; gape 22;
tars., 5; Mtc., 7.5; claw 3.

3224

3224. *Elasphorus Trochilus calliope*. ♀ juv.
83:113:44:27: cul., from feathers, 15; gape 19;
tars., 4.5; Mtc., 7; claw 3. Color same as *Trochilus*.

3225

3225. *Dendroica aestiva*. ♀ juv.
122:181:57:48: nost., 7.5; gape 13; tars., 18;
Mtc 15; claw 5.

Iris hazel, bill with maxilla brownish black
mandible flesh color tarsi & toes plumbeous
brown bottom of feet & claws yellowish
Cathartes aura. - A large flock of Buzzards
is always seen about two large cottonwoods
up the river. They are fond of walking in
companies along the margin of the River in
search of dead fishes and other perquisites.

August 19th 1884 Fort Verde, Arizona

121. ~~3225~~ Long-eared Bat *Antrozous pallidus*. ♂.
Total length, 110. Extent, 340. Nose to eye, 7.
ear, 15; occiput, 21; root of tail, 39 ^{tail fr. root to end of vert., 51.} Car. height, 30 ⁴⁹; breadth, 21. Arm, 51. Alar toe and claw, 9; claw, 2.5. Wing from carpal joint, 84. Leg, 22 ^{hind foot to end of claw, 12; claw, 2.5;}

~~3225~~ *Castor fiber* *Flondator*. Beaver. ♀ juv.

122 Total length, 630. Nose to eye, 48; ear, 90; occiput, 113; anus, 406. end of caudal hairs, 463. Ear height, 30 (to end of hairs, 35); breadth, 31. Arm, 58; fore arm: from joint 62; from elbow 75. Fore foot, 52; claw, 15. Distance between outstretched fore-feet, 370. Leg, 114; hind-foot, 99. longest claw, 17. Tail, measured from hairs (below), ~~180~~ ¹⁶⁷; from anus, 224; greatest width, 63. Upper incisor teeth, length from gums, 13; Width of each at apex, 5.5; width of both together at apex, 11; at base, 13. Length of lower incisor teeth from gums, 15; width of each at apex, 5.5; width of both at apex, one broken; at base, 13. Breadth of outspread hind-foot, 110. Claws of fore foot: 1st, 12; 2nd, 14; 3rd, 15; 4th, 14.5; 5th, 11.

Claws of hind-foot: 1st, 13; 2nd, 15; 3rd, 17; 4th, 17; 5th, 12. ~~Last~~ This evening Silbo and I went up the Verde in search of Great Blue Herons. Silbo carried a rifle for long range shooting, and I took my shotgun. About two miles up the Verde we found a place where Beavers have been hard at work cutting cottonwood-trees, and lopping off the branches close to the trunk. Well-worn paths had been made by them when carrying the branches to the river. I was walking silently and cautiously in the shadow of the cottonwoods at a place where the river-bank is quite high, when I saw a ripple proceeding from the nearer shore beneath the jutting roots and brushwood.

I crept stealthily to the shore and saw a great commotion ~~on~~ ^{beneath} the surface of the water. In fact the whole stream was quaking with the rapid motion of some animals beneath the surface. Soon a huge Beaver's head emerged from the shallow water on the opposite side, and in a moment another and another. It was probably an old Beaver engaged in giving instructional instructions to her family of Kitten Beavers. I cut their lesson short by pulling both triggers of my shotgun. There was a great splash, and the water seemed fairly to boil for a moment, and then only the spasmodic kicking and flapping of a wounded Beaver was heard. I plunged into the river bent upon getting my game before it recovered sufficiently to escape, and carried my gun along the stripe with, as I had done successfully once before. I seized the animal by the foot as it swam towards me under water, but, fearing it might bite me severely, I let go of it, when it swam down the current. I ran after it and just managed to seize its tail as it sank deep into a quicksand from which I escaped by seizing a tree which was a part of the dam they are building. The specimen was only a well-grown Kitten, but, having already shot a fine large old one, I was even more pleased with the young one than I should have been with an adult. We walked up the river a considerable way, but the night was too dark for good shooting in case we saw more Beavers, and we also wanted to see them complete their dam, and so concluded not to molest them any further until the dam is built and the danger of them leaving the spot lessened.

August 21st, 1884. Fort Verde, Arizona.
 3226. *Tringoides macularius* ♂ ad.

188; 320; 99; 54; cul., 22; gape, 25; bare part of tibia, 10; tarsus, 22; mtc., 23; cl., 4.

Breast spotted. Before shooting this specimen, I was uncertain whether this species in autumn assumes the immaculate under plumage of the young. It may change later, however.

Castor fiber. — This evening I repaired to the spot where I shot the young Beaver, and watched for these animals until it was pitch dark. I saw one large one at work on their dam, but it flapped its tail on the water and dived up stream, and I did not see it again.

When it got dark I could hear them splashing in the water, and flapping their tails on the ground with a sharp thud from time to time, but I could see nothing, as the night was dark, save when a distant flash of lightning illumined the water for a second.

A species of Hummingbird with buzzed about the yellow Cupress flowers amongst which I was lying. I suppose they are *Cesias*.

August 22nd, 1884. Fort Verde, Arizona.
 3227. *Accipiter cooperi* ♂ juv.

430; 755; 235; 220; cul., + cere, 23; cere, 9; cul., 16; gape 25; Tars., 65; mtc., 52; claw 13.

Iris pale straw color - tarsi & feet greenish yellow. claws blue-black. cere & along gape greenish yellow. bill bluish at base of mandibles shading into black. Shot in act of killing chickens.

3228. *Hydrochelidon* ♂ juv.

345; 590; 200; 74; cul., 27; gape 37; bare part of tibia — 8; tars., 16.5; mtc., 22; claw 6.5.

Iris 7/8 black slightly reddish on rami of lower mandible toward base - iris hazel. Tarsi & feet reddish brown - be blackish from webs. claws black.

3229 *Trochilus alexandri* ♂ ad.
 97; 111; 44; 26; cul., from feather, 19.5; gape 23; tars., 4.5; mtc., 7; claw, 3.

Trochilus alexandri ♂ ad.
 3230 98; 112; 45; 30; cul., from feather, 18.5; gape 23; tars., 4.5; mtc., 6.5; claw 3.

3231 Hummingbird ♀
 102; 122; 48; 30; cul., fr. feather, 19.5; gape 24; tars., 4.5; mtc., 8; claw 4. Iris hazel, bill black - orange on rami of mandible at base, tarsi, feet & claws, black.

3232 Hummingbird ♀
 100; 118; 45; 29; cul., fr. feather, 21; gape, 25.5; tars., 5; mtc., 7; claw 3. Edge of wings white - iris hazel - bill - legs, feet & claws, black.

Castor fiber. — The Beavers are putting forth strenuous efforts to cut down all the timber near their dam. I am interested to see whether they will actually succeed in cutting down some large trees from which they have stripped the bark and commenced work. Some of them are two feet or more in diameter; but they have cut two of the largest trees there, and it is probable that the others will soon follow. The limbs have been cut off of the felled trees at the trunk and carried off. To cut some of them the animals had to climb along the trunk to a position ten or fifteen feet above the ground. There are numerous slides in the vicinity and they are well worn and cleanly brushed with the leafy boughs which have been dragged down them. To night, I waited at the spot until dark, but no Beavers appeared. While lying beneath the branches of a prostrate cottonwood the various feathered denizens of the spot became very familiar. A flock of Gambel's Quails ran into my brushy retreat, but, on seeing me seemed paralyzed with fear, and whirred off with much "cackling" as soon as they had sufficiently recovered.

Mourning Doves alighted in pairs upon my canvas within a few feet of my face, thence eyeing me with much careful attention twisting their little necks into various shapes to enable them to see more particularly. Hummingbirds of several species were buzzing about the Queen's cup flowers about me; and, as I approached, and the Hummers retired for the night, these almost as beautiful but more wary. A pair of Blue Grosbeaks were instructing their progeny in the art of aerial progression, and amusing even the efforts of the timid, chattering younglings. Spotted Sandpipers were winging their way gracefully up or down the River on curved wings, making the air ring with the pleasing intonation of their notes. The croak of the Great Blue Heron, was occasionally heard as the birds sailed past, with streaming legs on broad pinions. The doves were drinking in numbers on the margin of the stream and the evening notes of countless numbers of small birds were heard. Even after darkness had thrown its pall over the landscape, amid the fitful lightning play and distinct sound of thunder, I often heard the song of the Black-throated Sparrow (*Amphispiza bilineata*). Shot a Skunk on the way home.

August 24, 1884. Ft. Verde, Arizona.

3233* *Tringa minutilla* ♂ (ad.?)
144:260:86:40: cul., 17: gape, 17.5: bare part of tibia, 15: tars., 20: Mtc., 21: claw 4.5. Iris hazel, bill black, bare part of tibia tarsi + feet dusky. Greenish - claws black.

3234* *Tringa minutilla* ♀ (ad.?) part
154:300:91:45: cul., 19: gape 20: bare of tibia 15: tars., 21: Mtc., 21: claw 4.

Tringa bairdii
3235. *Tringa bairdii* ♀ (ad.?)
174:315:98:45: cul., 26.5: gape, 26: bare part of tibia 16: tars., 24: Mtc., 22: claw 4. Iris hazel - all black bare part of tibia + tarsi greenish black feet + claws black.

3236 *Tringa bairdii* ♀ (ad.?)
174:315:100:48: cul., 26.5: gape 26: bare part of tibia, 15: tars., 22: Mtc., 21.5: claw, 4.5. Colors same as above.

3237* *Oxyechus vociferus* ♂ ad.
235:500:158:85: cul., 18: gape 22: bare part of tibia, 18: tars., 33: Mtc., 25.5: claw 5.5.

3238* Hummingbird. *Trochilus calliope* ♂ juv.
88:110:44:22: cul., from feathers, 17: gape 20.5: tars., 4: Mtc., 6.5: claw 3. Iris hazel, bill black mandible brownish yellow at base - tarsi, feet and claws black.

3239* Hummingbird *Trochilus calliope* ♀
86:107:42:21.5: cul., from feathers, 15.5: gape 19.5: tars., 4.5: Mtc., 7: claw 3. Colors same as above.

Guiraca caerulea. ♂ juv.
3240. 176:278:86:72: cul., 15.5: gape 17.5: tars., 19: Mtc., 22: claw 6.5. 16.5 Iris hazel - bill purplish slate color - pinkish purple on mandible, tarsi + feet plumbeous brown, claws brownish black.
Colaptes auratus mexicanus. One seen the first of Spring.

Bubo virginianus. - One flew from a row of cottonwoods up the River. (The only one I have seen in the Verde Valley. I saw a nest full of young ones on the stage road between Ash Fork and Hell Canon the last trip; and, at Ash Fork, Dr. ^{Pickens} ~~Pickens~~ showed me a pair of young ones which an Indian gave him. I have seen no others in Arizona.

3240a. *Trochilus calliope* ♀ juv.
Shot August 22nd, 1884. Skull, only, preserved, as the animal ejected its scent after it was shot. White-backed Skunk

- August 25th 1884 Ft. Verde Arizona
- 3241 *Butorides virescens* ♂ juv. Bird of the year.
length to end of claws 615; length 480; 740:
200: 70: cul. 54: gape 75: bare part of tibia
30: tars. 55: Mtc. 58: claw 9.5. Iris yellow.
3242. *Selasphorus rufus*. ♂ ad.
99; 105; 42; 30; cul. fr. feathers, 17; gape, 21;
tarsus, 5; mtc., 7; cl. 3.
Iris, dark brown. Bill, black, slightly lined
with yellowish along upper border of man-
dible. Tarsi, feet and claws, black.
3243. *Selasphorus rufus* ♂ juv.
95; 107; 42; 30; cul. fr. feathers, 16; gape, 20;
tarsus, 5; mtc., 6.5; cl. 3. Colors like No. 3242.
3244. *Selasphorus rufus* ♂ juv.
95; 111; 43; 29; cul., 17; gape, 20.5; tars., 4.5;
mtc., 6.2; cl. 3. Colors as above.
- 3245 *Selasphorus platycercus* ♀ ad
98; 115; 45; 30; cul., from feather 18; gape 22:
tars., 5; mtc., 7.5; claw 3.
- 3246 *Selasphorus rufus* ♂ juv.
97; 117; 45; 30; cul., fr. feathers 18.5; gape 22.5:
tars., 5; mtc., 7.5; claw 3.
3247. *Trochiloides caliope* ♂ juv. 1st plumage.
86; 105; 40; 25; cul., from feather 16; gape 20; tars., 4.5:
mtc., 6.5; claw 3.
- 3248 *Circus latirostris* Bourc. *Circus humingbirdi*. ♀ ad.
104; 122; 48; 31; cul. from feathers, 20; gape 24:
tars., 5; mtc., 8; claw 3.
3249. *Circus latirostris*. Bourc. *Circus humingbirdi*. ♀ ad.
101; 120; 48; 31.5; cul., from feathers, 21; gape 25:
tars., 5.5; mtc., 7.5; claw 3.
3250. *Circus latirostris*. ♀
104; 126; 50; 32; cul., from feathers, 21; gape 25:
tars., 5.2; mtc., 8.5; claw 3.5.
3251. *Circus latirostris* ♀
104; 126; 49; 30; cul., from feathers 21; gape 25:
tars., 5; mtc., 7.5; claw 3.

3252. *Circus latirostris* ♀
102; 118; 46; 30; cul., from feathers, 21; gape 25:
tars., 5; mtc., 8; claw 3.5.
~~*Circus latirostris*~~ *Circus latirostris*! - Tracks seen near the Verde
August 26th 1884. Ft. Verde, Arizona.
- Zamelodia melanocephala*. - One female
seen in the mesquites of the Verde bottom.
- Butorides virescens*. - Gilbo shot a Green
Heron near the mouth of Beaver Creek; but
it hid in the brush, after swimming to shore
with a broken wing, and could not be found.
- Mephitis mephitis*. - I shot a Skunk as
it was running beside the Beaver Creek
after dark; but it fouled its pelage so
that I dared not meddle with it, although
I hope to get its skull later.
3253. *Circus latirostris*. ♀ ad.
105; 125; 50; 30; culmen, 22.5; gape, 27;
tarsus, 5; mtc., 7.5; cl. 3.
3254. *Oxyechus vociferus* ♀ juv.
265; 493; 154; 123; cul., 21; gape, 23;
bare part of tibia, 22; tars., 25; mtc., 25; cl., 5
3255. *Oxyechus vociferus* ♀ juv.
265; 493; 155; 120; cul., 21; gape, 23.5;
bare part of tibia, 22; tars., 26; mtc., 26; cl., 5
3256. *Oxyechus vociferus* ♂ juv.
268; 485; 155; 124; cul., 21; gape, 23;
bare part of tibia, 22; tars., 33.5; mtc., 25,
claw, 5.3. Eyelid, orange-red. Irides, dark brown.
Bill, black, with a small patch of orange just at
base of lower mandible (on inner of mandible).
Bare part of tibia, tarsi, greenish flesh-color; feet,
tinged with orange and joints dark; claws, black.
All these above colored alike on soft parts.

August 27th, 1884. Ft. Verde, Arizona.

✓3257. *Cathartes mexicanus coarctatus*. ♀ ad.

153; 185; 58; 55; cul., 17; nost., 13; gape, 22; tarsus, 17; mte., 17; cl., 5.

This bird came into Mr. Jordan's house and there engaged in catching flies. It caught its bill in the screen door and was caught and kept as a pet.

✓3258. *Circus hudsonius*. ♂ (juv.?)

475; 1090; 345; 240; cul. & cere 26; cere 10; cul., 17; tars., 78; mte., 45; claw 15; gape 29.

Iris yellowish, cere dusky greenish - bill bluish on sides of maxilla at base, and on basal half of mandible, residue black. Tarsi & feet lemon yellow - claws black. Caught one of Jordan's chickens. He shot it & brought it to me.

Butorides virescens.

Ardea herodias.

} Quite numerous up Beaver Creek.

✓3259. *Sayornis sayi*. ♀ ad. Moulting.

✓3260. *Icteria virens longicauda*. ♀ juv.

The following is a description of a fish (*Catostomus*) caught in a dip net in Beaver Creek. The specimen is below the average size, but was the only one caught:-

Dimensions. - Total length, 280. Tail, 48. Snout to occiput, 55; to eye, 33. Opercle, 63; Depth of eye, 8.5; of head at orbit, 32. Length of dorsal fin, 37; height, 38. Length of ^{anal} ~~ventral~~ fin, 18; depth, 139. Depth of anal fin, 31. Depth of pectoral fin, 41. Depth of body midway between occiput and dorsal fin, 154. Fin rays: Caudal, 18; Dorsal, 12; Pectoral, 16; Ventral, 9; Anal, 8. Scales in lateral line, 60. Interorbital space 23 mm. Length of eye, 9.5. Upper lip with five rows of tubercles. Lower lip also full with ten or more rows of tubercles.

3261. *Selasphorus rufus*. ♂ juv.

97; 114; 43; 29; cul., from feathers 18; gape 22; tars., 5; mte., 7; claw 3.

3262. *Selasphorus rufus*. ♂ juv.

94; 111; 43; 28; cul., from feathers, 16; gape 20; tars., 4.5; mte., 6.5; claw 3.

3263. *Selasphorus rufus*. ♀.

92; 108; 42; 26; cul., from feathers, 17; gape 21; tars., 4.5; mte., 6.5; claw 3.

3264. *Selasphorus* ^{*irregularis caliope*}. ♀

82; 103; 39; 24; cul., from feathers 14; gape 18; tars., 4; mte., 6; claw 2.6.

3265. *Circe lateralis*. ♀ ad.

103; 117; 49; 30; cul. from feathers 20; gape 24.5; tars., 5; mte. 7.5; claw 3.

August 29th, 1884. Ft. Verde, Arizona.

3266. *Circe latirostris*. ♀ ad.

103; 125; 49; 30; cul., 20.5; gape, 24.5; tarsus, 5; mte, 7.7; claw, 3.2.

3267. *Lanius ludovicianus excubitorides* ♀ ad.

233 X 322. Moulting.

3268. *Oreoscoptes montanus*. ♀ ad.

227; 315; 96; 97; nost., 11; gape, 25; tarsus, 31; mte., 26; cl., 6. Sides, reddish yellow. Bill, black, with some of mandible, bluish flesh-color; yellowish along gape. Front of tail, dorsal surface of feet, and claws, blackish; Tarsi, behind and under surface of feet, yellowish.

3269. *Spizella breweri*. ♂ ad.

149; 205; 64; 70; cul., 9.6; gape, 10; tars., 18; mte., 17; cl., 4.6. Sides, hard. Bill with maxilla dusky brown, mandible flesh-color. Tarsi, feet and claws, brown with a plumbeous shade.

✓3270. *Querquedula cyanoptera*. ♂ juv.

415; 635; 192; 84; cul., 48; gape, 53; tars., 34; inner part of tibia, 10; mte., 47; cl., 9.

August 31st, 1884. Ft. Verde, Arizona.
 To-day went fishing in Beaver Creek near
 the mouth. I caught 13 specimens of a
 species of *Salmonidae*, exhibiting a regular
 gradation in size from the smallest (measuring
 in length, 77) to the largest from these 13
 specimens. I give the following description:
 Largest specimen. Length to base of caudal 240.
 Head (length of side), 76. Eye, 10; greatest
 depth, 6.1. Fin rays. - D. 1. P. 14. V. 9. A. 9.
 C. about 24. Length of dorsal fin, 29. Height
 anteriorly, 38. Lat. line 84 scaled.

Colors: - Iris golden. Dorsal ashy, dark
 with gold and silver dapples, below, silvery
 white. Fins, orange tinted. Sides with
 obsolete blackish bands most distinct towards
 the tail. Length of caudal 1 1/2 of upper lobe,
 32; lower, 47. Emargination 34. Height of
 posterior part of dorsal, 10. Height posterior to the central
 part of dorsal, 10. The smallest specimen is lighter colored and
 has a gold band extending from the superior
 extremity of the opercular opening to the base
 of the tail on either side.

The specimen 2nd in size had 90 scales in lat. line.
 These fishes were caught on the flesh of a
 Dove used for bait, and one or two on pieces
 of a fish of their own species.

Andea herodias. - While fishing and standing
 motionless, a Heron ~~swam~~ slowly up to
 me and alighted on a sycamore tree close
 by. It was a pretty thing to see it soar past
 within a few yards on "set" wings. Soon after
 it alighted in the water and began fishing
 keeping me company for some time.
Fiber gibellicus. - A muskrat also made bold
 to share our piscatorial sport, and swam
 quietly about the stream, sitting on a log
 to eat its fishes.

September 1st, 1884. Ft. Verde, A.T.
 3271. *Pipilo erythrophthalmus maculatus megalonyx*. ♂ ad.
 222; 282; 89; 107; cul., 14.5; gape, 16.5;
 tarsus, 25.5; mte., 26; cl., 9. Iris, bright
 red. Bill, black. Tarsi, feet & claws, dark brown.

3272. *Calamospiza bicolor*. ♂ ad.
 175; 283; 87; 73; cul., 14; gape, 15.5;
 tarsus, 23; mte., 21.5; cl., 6. Iris, hazel.
 Bill, with maxilla plumbeous brown, dusky
 at tip; mandible flesh-color at base, shading
 through blue to black just at tip. Tarsi
 fleshy-brown. Feet & claws, brown. ^{Feet & claws} ~~Feet & claws~~

3273. *Calamospiza bicolor*. ♂ ad.
 175; 287; 87; 71; cul., 14; gape, 15; tarsus,
 25; mte., 21; cl., 5.5. Colors of soft parts the
 same as above except that the tarsi are
 nearly the same color as the feet.

The condition of the bones did not prove
 that these birds were young, and from
 the plumage I cannot now decide.

3274. *Aphelocoma woodhousei*. ♂ ad.
 305; 405; 126; 147; cul., 28; gape, 34;
 tarsus, 46; mte., 31; cl., 9.5. Iris, brown.
 Bill, legs, feet and claws, black.

3275. *Melanerpes formicivorus*. ♀ ad.
 240; 455; 140; 92; cul., 25.5; gape 30;
 tarsus, 20.5; mte., 26; cl., 9. Iris, white.
 Bill, blue-black. Tarsi & feet, plumbeous;
 claws, plumbeous black.

3276. *Melanerpes formicivorus*. ♂ ad.
 232; 455; 140; 86; cul., 25; gape, 29;
 tars., 21; mte., 25; cl., 9. Colors like No. 3275.

3277. *Melanerpes formicivorus*. ♂ ad.
 235; 452; 137; 83; cul., 26; gape, 30.5;
 tarsus, 23; mte., 26; cl., 9. Colors like No. 3275.

3278. *Melanerpes formicivorus*. ♂ ad.
 236; 455; 140; 82; cul., 27; gape 32;
 tarsus, 22; mte., 24; cl., 9.
 Colors of soft parts like No. 3275.

To-day, I escorted Mrs. Lieut. Steever from Fort Verde where she was visiting to Hudson's Ranch on Ash Creek, where Lieut. Steever met her. I returned by the Mail buckboard via Cherry Creek, the trip consuming the whole day. The following birds were noted:

Harporthynchus crissalis. - A number seen in the vicinity of Hudson's, and thence through Cherry Creek into the Verde bottom, where they are fairly common.

Sialia mexicana. - Several small flocks were seen in the timber country of Cherry Creek. None have been seen in the Verde bottom since spring.

Sitta pygmaea. - Quite numerous in the pines of Cherry Creek.

Cathartes mexicanus conspersus. - One seen in a little Cañon in Cherry Creek.

Eremophila alpestris. - In flocks.

Dendroica aestiva. - Everywhere abundant.

Geothlypis trichas. - In the Verde bottom. The exact subspecific designation of the Verde Yellow-throats I have not made out. Brewster's Arizona specimens were intermediate between the Mexican var. melanops, and his recently instituted (See Bull. U. S. C., vol. VIII, No. 3, p. 158, July, 1883) var. occidentalis.

Icteria virens longicauda. - Verde Valley.

Pyrranga ludoviciana. - Abundant in the timber at Cherry Creek.

Tachycineta thalassina. - Plentiful in one locality.

Petrochelidon lunifrons. - Abundant.

Phainopepla nitens. - Several on Cherry Creek.

Vireo pusillus. - In the Verde bottom.

Lanius ludovicianus excubitorides. - Abundant, or at least common and general in its distribution, and somewhat noisy.

Carpodacus frontalis. - Generally distributed in families.

Astragalinus psaltria. - Common.

Melospiza fasciata. - Verde Valley.

Amphispiza bilineata. - Everywhere abundant.

Junco hiemalis. - I thought I heard a Snowbird in Cherry Creek Cañon.

Calamospiza bicolor. - One flock in Verde Valley.

Zamelodia melanocephala. - One pair on Cherry Creek in oak and juniper woods.

Pipilo maculatus megalonyx. - Everywhere plentiful except in the Verde Valley.

Pipilo aberti. - Everywhere common.

Sturnella neglecta. - Several between the settlement on Cherry Creek and the Verde bottom in some little prairies. They remained in these places all summer and bred there.

Corvus corax. - Occasional. Rather rare.

Aphelocoma woodhousei. - Very plentiful everywhere except in the Verde bottom where I have never seen any; but they appear as soon as one reaches the oaks and cedars of the foot-hills.

Tyrannus verticalis. - Numerous in the Verde Valley. In families. Noisy.

Tyrannus vociferans. - Occasionally seen in family groups, scattered everywhere.

Myiarchus cinerascens. - One seen in the Verde Valley.

Sayornis sayi. - At Fort Verde.

Sayornis nigricans. - On Cherry Creek.

Always near water - streams.

Chordeiles acutipennis texensis. - Several.

Parryptila saxatilis. - A large flock near the head of Copper Cañon.

Trochilus alexandri. - Very abundant.

Selasphorus rufus. - Abundant where the yellow Caper is in bloom.

Picus scalaris. - Verde Valley.

(*Picus* ?). - A woodpecker of medium size and with a note like *Picus pubescens* was seen in an oak-tree in Cherry Creek.

I think it was *Picus stricklandi*.

Melanerpes formicivorus. - Very abundant in the timber in Cherry Creek. They rove about in flocks of half dozens and in habits and sportive disposition resemble the Red-headed Woodpecker (*M. erythrocephalus*).

Colaptes auratus mexicanus. - Common in the wooded region of Cherry Creek.

Falco sparverius. - Several seen.

Buteo borealis calurus. - A fine adult seen in Cherry Creek.

Buteo swainsoni. - Common.

Zenaidura carolinensis. - Everywhere.

Aquila chrysaetos. - One seen in Copper Canon.

Cathartes aura. - Numerous.

Lophortyx gambeli. - Everywhere and all ages in flocks up to 50 individuals.

Oryzopsis vociferus. - Heard crying at Fort Verde during the night.

In all 46 species were noted during the day's ride.

September 2nd, 1884, Fort Verde, Arizona.

- ✓ 3279. *Springoides macularius*. ♂ juv. Shot on Beaver Creek. 190; 335; 103; 52; culmen, 23; gape, 35.5; tarsus, 34.5; middle toe and claw, 23; claw, 4; bare part of tibia, 10.

September 3rd, 1884, Fort Verde, Arizona.

- ✓ 3280. *Ceryle alcyon*. - ♂ ad. Bare part of tibia, 10. 345; 575; 1163; 103; cul. from base, 61; gape, 75; tarsus, 13; middle toe and claw, 23; claw, 9. Iris, hazel.
- Zamelodia melanocephala*. - One male seen on Beaver Creek.

September 4th, 1884, Fort Verde, Arizona.

- ✓ 3281. *Pyrocephalus rubinus mexicanus*. ♂ juv. 150 X 250. Passing through its 2nd moult. One red feather in crown. Bill, brownish-black. Tarsi, feet and claws, black. When shot it was sitting, as they love to do, upon the branches of a prostrate Cottonwood that had been washed from the shore of the Verde.

- ✓ 3282. *Lophortyx gambeli* ♂ juv. 130 X 335. Iris, bright hazel. Bill and claws, dusky brown. Tarsi and feet, pale reddish-brown.

- ✓ 3283. *Lophortyx gambeli* ♀ juv. 110 X 315. Colors the same as No. 3282, except that the bill is less dusky above and flesh-color below.

- ~~3283~~ *Mus* } Skull. ♂ ad. }
~~3283~~ *Mus* } Destroyed }
~~3283~~ *Mus* } Skull. ♂.
~~3283~~ *Mus* } Skull. ♀.
 3284. *Cisce velox* *platycercus* ♂ juv. 96; 107; 44; 27; Cul., 18; gape, 22; tarsus, 5; mte., 7; cl. 3. Iris, hazel. Bill, tarsi, feet & claws, black.

- ~~3284~~ *Fiber* *castor fiber* ♂ juv. 123. Total length, 750; nose, to eye, 49; ear, 99; occiput, 120; anus, 490; end of caudal hairs, 565; end of outstretched hind foot, 615; Ears, height, 32 (to end of hairs, 37); breadth, 31; Arm, 48; forearm from joint, 55; from elbow, 75; fore-foot & cl., 57; Claw, 16. Leg, 109; Hind-foot, 99; longest claw, 17; Tail, measured from hairs below, 198; from anus, 253; greatest breadth, 77; Upper incisor teeth, length from gums, 14; width of each at apex, 5; width of both together at apex, 10; at base, 12.5; Length of lower incisors from gums, 20; width of each at apex, 5; of both together at apex, 10.5; at base, 13; Breadth of outspread hind-foot, 118; Claws of fore-foot, 1st thumb, 11.5; 2nd, 13;

3rd, 4th, 15; 5th, 11. (Caul. of hind-foot: 1st, 12.5; 2nd, 4; 3rd, 17.5; 4th, 13. Distance between outstretched fore claws, 390. Stomach filled with bark of the cottonwood tree. We had our cook serve the hind quarters and loin of this young Beaver roasted. Although we only intended to taste it as an experiment, we found it so deliciously tender, firm and sweet that we dined off it, and ate the balance cold for tea. It was entirely free from and strong taste or odor and was certainly as toothsome a piece of meat as I ever tasted, and was so pronounced by all who ate it.

September 7th, 1884.

Fort Verde, Arizona.

Great Horned Owl. - One of these large Owls alighted in a little cottonwood tree in front of my quarters late this evening. Lieut. Vogdes came to the Captain's house, where I was calling with Mrs. Meadors & William, and told me there was an Owl in front of my quarters as large as a Turkey Buzzard. I tried to see it, but failed, and frightened it so that it flew, but alighted on another tree close by, where I shot it dead with a light charge of 88. It was late - long after taps - and the guard called to the "Sgt. of the Guard" and they all marched over to my quarters. I took my bird & gun to show to the ladies at Capt. Russell's, and left Lieut. Vogdes to settle it with them.

3285 Bubo virginianus subarcticus ♂ ad.
490; 1270; 350; 315; cul. & cere, 40; cere, 21;
culmen, 24.5; gape, 45; tarsus, 69;
mte., 71; cl., 28; inner cl., 30; outer cl., 25; hind cl., 23.5;
diameter of eye, 24. height of ear tufts, 69. Irides bright
yellow. Cere, ~~pink~~ grayish. Bill, dusky plumbeous,

tipped with horn-color (both mandibles). Loes clothed with hair-like feathers above, with a few terminal scutellae above of a plumbeous color; feet, yellow, white claws, bluish-black. Stomach empty.

Merula erythrogastra. - A few seen to-day.

Tachycineta thalassina. - Abundant.

Myiarchus cinerascens. - Still here

September 8th, 1884. Fort Verde, Arizona.

This afternoon walked a mile or two up the River, collecting birds. The following named species were noticed.

Oreoscoptes montanus. - A few seen.

Mimus polyglottus. - Abundant.

Harporhynchus crysalis. - Several noticed.

Dendroica aestiva. - Abundant.

Geothlypis macgillivrayi. - Several seen. One female shot.

Pyraura ludoviciana. - One female.

Merula erythrogastra. - A number seen.

Tachycineta thalassina. - Vast numbers of these swallows are now seen here every day.

Petrochelidon lunifrons. - Quite a number seen.

Phainopepla nitens. - Quite numerous.

Vireo gilvus swainsoni. - One shot on the wing.

Lanius ludovicianus excubitorides. - Common.

Carpodacus frontalis. - Abundant.

Astragalinus psaltria. - Singing,

and uttering an exceedingly sad call. They

delight to sit on dead trees in the water.

the Verde River in small flocks. They

feed upon the wild sunflowers.

Melospiza fasciata. - Common

along Beaver Creek & other suitable spots.

Amphispiza bilineata. - Abundant.

Spizella breweri. - Scarce.

Passerina amoena. - One near the Verde.

Pipilo fuscus mesoleucus. - In mesquites

Pipilo aberti. - Common.

Nicolothrus ater. - They seem to have nearly all departed, but a few flocks composed of young birds in gray plumage are still present.
Icterus cucullatus. - Two were shot. The only ones seen. The female was mortally wounded and the young one refused to desert it, although very shy, and eluded me for a long time, by hiding in the young growth of cottonwoods near the wounded parent; but it always came to the spot from its hiding place if I withdrew and so was finally secured together with the old female. They were exceedingly shy, but made their whereabouts known by a low, subdued rattling note in faint imitation of *Icterus baltimore*.
Corvus corax. - A few pairs.
~~*Perisoreus canadensis*~~ *Symnolitta cyanacephala*. - A large flock of gray birds with a peculiar guttural croak and a jay-like note have been seen at intervals since September 2nd. I suspected that they were *Perisoreus*, and yesterday my cook, Private Gilbo told me he saw a flock of "Camp Birds" flying past our house. He said he had seen the free birds so tame as to hop between himself & a companion, in camp in Colorado, and eat the crumbs they dropped when eating a meal. Today I saw a flock of from 50 to 100 individuals. Have only seen them on the wing.

Tyrannus verticalis. - Only a few seen.

Sayornis nigricans. - Fairly common beside streams.

Coutopus richardsoni. - Several seen for the first time since spring.

Pyrocephalus rubinus mexicanus. - One seen.

Empidonax traillii pusillus. One on Beaver Creek.

Geothlypis alexandri. - Abundant.

Salasphorus rufus. - Abundant.

Circus latirostris. - A few seen.

Panyptila saxatilis. Large numbers migrating.

Ceryle alcyon. - One on Beaver Creek.

Accipiter cooperi. - One fine adult male.

Falco peregrinus. - Young and old.

Sturnella magna. - A few seen.

Pandion haliaetus. - One or two seen.

Cathartes aura. - Numerous.

Zenaidura macroura. - Abundant.

Lophortyx gambeli. - Feeding on wild grapes.

Podiceps montanus. - One was shot on a mud island in the Verde River.

Tringa minutilla. - Two shot.

Pelidna alpina ^{american}. - One shot.

Tringoides macularius. - Several seen.

Agreus vociferus. - Numerous.

Butorides virescens. - One on Beaver Creek.

Ardea herodias. - One adult & several young.

Rallus (?) ^{porzana carolinensis}. - A rail-like bird was seen.

to make a short flight & drop in some water-grasses on the opposite side of Beaver Creek, where I was unable to cross.

3286. *Vireo gilvus swainsoni*. ♂ ad.
 140: 217: 67: 57: not, 7: gape 16: tail 16: Mte., 15: claw 5. Iris hazel, maxilla brownish black, mandible flesh color tipped with dusky - tarsi & feet plumbeous - claws dusky.

3287 *Podiceps montanus*. ♀ (ad.?).
 179: 380: 120: 57: cul., 11: not, gape 13: bare part of tibia 13.5: tars., 23: Mte., 21: claw 7. Iris hazel bill black slightly orange on ramus of mandible at base - tarsi, bare of tibia & feet dusky greenish yellow, claws black.

3288 *Tringa alpina americana*. ♂ (ad.?).
 184: 380: 122: 57: cul., 22: gape 23: bare part of tibia, 13.5: tars., 23: Mte., 22: claw 5. Iris hazel, bill, legs, feet & claws black.

3289. *Tringa minutilla* ♀ ad.
 153: 292: 89: 44: cul., 19: gape 18.5: bare part of tibia 11: tars., 20: Mte., 21: claw, 4.5. Iris hazel - bill black - legs & feet greenish brown - claws blackish.

3290. *Tringa monticola*. ♀
152: 284: 67: 47: cul., 18.5: gape 18: bare part
of tibia 13: tars., 19: Mtc., 20: claw 4.5. Colors the
same as no. 3289. This bird + the two preceding
ones were feeding together + killed at one shot.

3291. *Geothlypis macgillivrayi* ♀ ad.
140: 186: 58: 59: nost., 8: gape 14: tars., 21: Mtc., 17:
claw 5. Iris hazel. bill brownish black - with narrow
line of flesh color along gape - mandible flesh
color dusky toward tip - tarsi + feet fleshy brown
claws brown.

3292. *Pipilo fuscus mesoleucus*. ♂ juv.
229: 304: 94: 115: cul., 16: gape 17: tars., 27:
Mtc., 27: claw 8. Iris hazel.

✓ 3293. *Panyptila faxatilis*. ♀ ad.
159: 342: 140: 64: cul., 6.5: gape 15: tars., 10:
Mtc., 10.5: claw 6. Iris hazel - bill black - feet flesh
color - claws flesh color with dusky brownish markings.

✓ 3294. *Panyptila faxatilis*. ♀ ad. 10.5:
161: 342: 142: 65: nost., cul., 6.5: gape 16.5: tars., 10.5:
Mtc., 11.5: claw 7. Colors same as no. 3293.

✓ 3295. *Icterus cucullatus*. ♀ ad.
106: 270: 85: 92: cul., 20: gape 22: tars., 24:
Mtc., 21: claw 6.5.

✓ 3296. *Icterus cucullatus* ♂ juv.,
203: 270.

✓ 3297. *Tachycineta thalassina*. ♀ 127: 288.

✓ 3298. *Tachycineta thalassina*. ♀ ad. 136: 308. Moulting.

September 9th, 1884. Fort Verde, Arizona.

✓ 3299. *Tringoides macularius* ♂ juv.
195: 323: 98: 51: cul., 25: gape 28: bare part of
tibia 11: tars., 23: Mtc., 22: claw 4.

3300. *Porzana carolina* ♂ juv.
221: 363: 110: 55: cul., 26: gape 23: bare part
of tibia 13: tars., 34: Mtc., 44: claw 7. Iris olive
brown. The same specimen noted as seen on page 193.

3301. *Melospiza fasciata*. ♀ ad. Not skinned.
165: 222.

3301
3302. *Contopus richardsoni* ♀ juv.
158: 260.

3303. *Sayornis nigricans*. ♀ ad.
186: 282: 90: 83: nost., 10.5: gape 21: tars., 18:
Mtc., 15: claw 5.

3304. *Pyrranga ludoviciana*. ♂ juv. 188: 292. Not skinned.

3305. *Carpodacus difficilis*. ♀
141: 202: 61: 57: nost., 8: gape 17: tars., 17:
Mtc., 13: claw 5. Iris hazel - maxilla brownish black
mandible entirely flesh color - tarsi, feet + claws
black.

3306. *Geothlypis trichas*. Not skinned. ♀
137: 178: 55: 55: cul., 8.5: gape 14: tars., 21.5:
Mtc., 17: claw 4.5. Iris hazel.

3307. *Geothlypis trichas*. ♀
133: 168:

3308. The following birds were seen: -

Oroscoptes montanus. - One or two.

Mimus polyglottus. Abundant.

Geothlypis trichas. - Several seen.

Dendroica aestiva. Abundant.

Merula migratoria. - One or two seen.

Petrochelidon lunifrons. - A few.

Tachycineta thalassina. - A large number

present, and seen everywhere.

Phainopepla nitens. - One or two females.

Vireo pusillus. - A few seen in the

mezquite bushes.

Lanius ludovicianus excubitorides. - One or two.

Carpodacus frontalis. -

Astragalinus psaltria. - Feeding on sunflower

seeds and perching in small flocks on

dry cottonwoods in the River, frequently

bathing in the Verde along the shore.

Melospiza fasciata. - Feeds upon agave

leaves which grow abundantly in

sluggish places along Beaver Creek.

Amphispiza bilineata. - Several seen

Pipilo aberti. - Quite numerous ^{everywhere in the Valley}, but most abundant in the meadows.

Cornus corax. - Common
~~*Pyrocephalus cyanocephalus*~~ *Pyrocephalus cyanocephalus*. - One flock.

Their cry is cat-like and they also have a croaking note. First. Vogdes saw several flocks to-day, between Prescott & Ft. Verde, and heard their cat-like cries in Copper Cañon.

Tyrannus vociferans. - One seen.

Agelaius phoeniceus. - One or two about the Post.

Agelaius phoeniceus.

Coturnix richardsoni. - A few seen.

Euphonia flaviventris. - One.

Trochilus alexandri. - Numerous.

Salpinctes obsoletus. - Very abundant.

Tachycineta thalassina. - A few females.

Psaltriparus saxatilis. - Very abundant.

Zenaidura macroura. - Plentiful.

Lophortyx gambeli. - Large flocks.

Falco sparverius. - Numerous.

Falco peregrinus. - One adult.

Cathartes aura.

Pandion haliaetus carolinensis. - One.

Butorides virescens. - One on Beaver Creek.

Ardea herodias. - Several.

Ardea herodias. - One seen on Beaver Creek.

It could scarcely be flushed from a tangle of roots and grass, and when it alighted across the stream could not afterwards be found.

Porzana carolina. - One shot where it was seen yesterday.

Tringoides macularius. - Several seen.

Pelecanus alpinus americanus. - One was seen on the Verde River. When on wing it utters a very curious sound very unlike that of any other shore birds with which I am acquainted. It was rather shy and could not be shot.

Oxyechus vociferus. - Only one seen.

Sept. 10th, 1884. Fort Verde, Arizona.

33042

No. 125.

Tamias harrisi (Aud. & Bach.) Allen. ♂ ad.

Nose to eye, 16.5; ear, 36; occiput, 44; root of tail, 163; end of outstretched hind leg, 250; Tail from root to end of vertebrae, 80; h. hair, 107; Ears, height ^{ear} 12; breadth, 11. Arm, 26; Fore-arm, 26; fore-foot, ^{longest cl.} 24; Leg, 35; hind-foot, 36; longest claw, 6.5. Distance between outstretched fore claws, 175.

total length 270. Hair very coarse and scanty in places showing areas of bare, black skin both above and below. They sit up perfectly erect on their hind feet like Prairie Dogs.

13305

Melospiza fasciata fallax. ♀ juv.

16.9; 223.

13306

Geothlypis trichas, Hairy. ♂ ad. ♀.

313; 322; 99; 148; ccl., 38; uolt., 30; gape, 40; tarsus, 33; ule., 30; Cl., 8. Irides, yellowish-brown. Bill, black. Tarsi & feet, dusky plumbeous. claws, blackish; soles of feet, grayish flesh-color. Singing when shot. This species has been singing a sweet song since September 1st. It feeds of wild grapes.

13307

Lophortyx gambeli. ♂ juv. 149 X 365.

33072

124.

Long-eared Bat. *Antrozous pallidus*. ♀ ad.

Nose to eye, 9; ear, 16; occiput, 23; root of tail, 60. Tail from root, 43. Ears, height, 30; breadth, 22; height of tragus, 16. Arm, 28; fore-arm, 55; ^{longest cl.} 90; ^{longest cl.} 9; cl., 3. Leg, 21; hind foot, 12; longest cl., 3.3. Expanse of wings, 360. Length of thigh, 21.

Mimus polyglottus. - Feeding upon wild grapes.

Geothlypis trichas. - Abundant where wild grapes grow. Singing.

Erismoptila alpestris. - A few seen.

Dendroica aestiva. - Very abundant.

Geothlypis trichas. - A few seen.

Icteria virens. - A few among the grape

vines on Beaver Creek.

Pyrranga ludoviciana. - A few seen.
Petrochelidon lunifrons. - One or two seen. Of
the myriads of Violet Green Swallows (*I. thalassine*)
and White-throated Swifts (*Pomphila saxatilis*) seen
flying everywhere during the past few days, not
a single one of either could be seen to-day.
Phainopepla nitens. - One or two seen.
Vireo pusillus. - A few seen. Singing.
Tyrannus ludovicianus excubitorides. - A few seen.
Carpodacus frontalis. - Abundant. Singing.
Astragalinus psaltria. - Numerous. Not
like the Killdeer's note is one call of the
bird that a soldier who accompanied me mistook
it for that of the Killdeer.
Melospiza fasciata. - Only found beside water.
Amphispiza bilineata. - Roosts under mesquite
bushes whence we flushed families of them
after nightfall.
Pipilo aberti. - Everywhere abundant.
Icterus cucullatus. - One seen.
~~Ag~~ *Scoliocephalus cyanocephalus*. - Have
just returned in small numbers to the
corals about Fort Verde.
Corvus corax. - Common.
~~Perisoreus~~ ? *Cyanocephalus cyanocephalus*. One flock.
Tyrannus sp. - One.
Bayanus sayi. - About the Post.
Bayanus nigricans. - Common about water.
Cebotopus richardsoni. - Quite numerous.
Trochilus alexandri. - Abundant.
Selasphorus rufus. - Abundant.
Ceryle alcyon. - One on Beaver Creek.
Colaptes auratus mexicanus. - One on Beaver Creek.
Falco sparverius. - Common. One pursued a
shore lark for a good while but it was so
expert at turning & dodging that it finally managed
to elude the Hawk and escape.
Cathartes aura. - Numerous.
Zenaidura macroura. - Numerous.

Lophortyx gambeli. - In flocks of an
hundred or more.
Oxyechus vociferus. - One pair only.
Zenaidura macroura. - A few seen.
Ardea herodias. - Several seen.
Butorides virescens. - One seen on Beaver Creek.

September 11th, 1884. Fort Verde, Arizona.
To-day is my 28th birthday! After tea,
Miss. Mcarns, little Lillian & Private Gilbo our
striker went down to the River with our
guns and rods. Ella shot the first bird,
an Abert's Towhee, and caught the first fish,
a "Verde Salmon". I shot four Baird's Sandpipers
& a Crimson-fronted Purple Finch; and Gilbo went
up the Verde after Beavers, and returned with
a Sparrow Hawk and a Dove. I shot a Dove
for bait and caught the "Verde Salmon" on it.

3307 *Verde Salmon* ad.

Length to caudal, 280. Greatest depth of body, 75.
Head to opercle, 76. Eye, 11. Length of dorsal,
35; height, 43. Caudal, 55.

Finn-rays: D., 1, 9; P., 16 (about; much crowded posteriorly);
V., 9; A., 9. Lat. l. 95. (Made up in a skin.)

3308* *Pipilo aberti* ♀ juv. 234: 280.

3309 *Carpodacus frontalis* ♀ juv. 155: 246.

3310. *Linumulus sparverius* ♂. 270: 580: 187:
136: cul., + cere 15: cere 4: cul., 11.5: gape 17: tars.,
40: Mtc., 31: claw 10.

3311. *Fringa bairdi* ♀
190: 398: 125: 55: cul., 24: gape 25: bare
part of tibia 15: tars., 23: Mtc., 21: claw, 5.

3312 *Fringa bairdi* ♂
189: 395: 128: 58: cul., 23: gape, 25: bare
part of tibia, 13: tars., 23: Mtc., 22: claw 5.

3313. *Fringa bairdi* ♀
193: 397: 124: 54: cul., 24.5: gape 26: bare
part of tibia, 15: tars., 23: Mtc., 22: claw 5.

3314. *Tringa bairdi* ♂

184; 388; 125; 54; cul., 22; gape 23.5; bare part of tibia, 12; tars., 23; Mtc., 22; claw 5.

Iris hazel, bill, legs, feet and claws black.

3314. *Lepus sylvaticus nuttalli arizonae* major ♀ ad.

No. 126. nose to eye 29; nose to ear 60; nose to occiput 75;

nose to root of tail 350; ears-height 86; width 45;

arm, 55; forearm 62; forefoot 45; longest claw 7.5;

leg 95; hind foot 89; longest claw 10; distance

between outstretched forefeet 340; nose to end

of outstretched hind foot 550; tail from root to

end of hairs 70; to end of vertebrae 45;

September 12th, 1884. Fort Verde, Arizona.

Phalaenoptilus nuttalli. - One Nuttall's Whet. & poor-will was heard & one seen this evening.

Castor fiber. - One young Beaver was seen in the Verde. They swam with just the nose and fore part of the head out of water. This one climbed out upon the bank on the opposite side of the River, where I shot at it unsuccessfully.

September 13th, 1884. Fort Verde, Arizona.

Buteo viridis. - Three were seen on Blavet at one time. One was shot, but carried off by some animal before it could be recovered.

Tringoides macularius. - Quite numerous.

Carpodacus frontalis. - Feeds upon the grapes up Beaver Creek, where there are hundreds of them.

The alight on the mesquite bushes at the side of the Cañon in close flocks as dense as those of Cedar Birds (*Amphispiza*) in the East.

Gambel's Quail (*Lophortyx gambeli*) is very abundant

in the region of the grapes in Beaver Creek Cañon

where we spent a part of the day gathering

grapes to make jelly. I easily secured

seventeen of them. Their crops distend with grapes & berries.

Ceryle alcyon. - One on Beaver Creek.

Crotalus ? - I shot a Rattlesnake

about six feet in length () having 15 rattles & a "button". I was just about to shoot some Gambel's Quails when a loud blowing and rattling apprised me of its presence, and looking upon the ground at my feet in a dense patch of yellow cypresses I saw this huge snake just in the act of striking at me. I sprang to one side and escaped and as the serpent coiled up again I moved around to a position whence I could shoot its head off without injuring the body. I then measured its length and removed about 3/4 of the skin with the rattles, not wishing to handle the head extremity as my shot must have ruptured the venom sacs and spilled the poison upon the adjacent parts. The flesh was white and delicate looking. I brought it home after carefully washing it in Beaver Creek, and ~~was~~ I had it cooked and ate it for breakfast next day, finding it very sweet and good, and entirely free from any strong or gamey odor or taste. In fact it was about the same as frog's flesh in both appearance and taste - a very toothsome dish, fit for any table.

In the afternoon, I shot an other large Rattlesnake on Beaver Creek near the Verde, and preserved the greater part of the skin and the rattles. There were 11 rattles & a button.

Oreoscoptes montanus. - Feeding on grapes.

Phainopepla nitens. - A number were seen on Beaver, where they were feeding on wild grapes.

Colaptes auratus mexicanus. - One seen on Beaver Creek. Hitherto they have been scarce in the Valley, since ^{early} spring.

Tyrannus verticalis. - Several seen.

Sayornis nigricans. - Several on Beaver Creek.

Arremonops phalaris. - Singing.

Sayornis saya. - Singing a regular genuine song.

- ✓3315. *Carpodacus frontalis*. ♂ juv. Showing a trace of red on rump & breast. 155; 243; 75; 65; culm. 11; gape, 12; tars., 17; mte., 19; cl., 6. Iris, hazel. Bill dusky olive-brown above, fleshy brown below. Tarsi feet & claws, dusky brown.
- ✓3316. *Carpodacus frontalis*. ♀ juv. 150; 145; 76; 64; cul., 10.5; gape, 11.5; tars., 18; mte., 19.5; cl., 6. Colors of soft parts the same as No. 3315.
- ✓3317. *Tringoides macularius*. ♀ juv. 200; 335; 105; 59; cul., 23; gape, 25; bare part of tibia, 13.5; tarsus, 23; mte., 23; cl., 4.

127.

✓3318. *Long-eared Bat*. *Antrozous pallidus*. ♂ ad.

Expanse of wings, 373. Nose to eye, 8.5; ear, 15; occiput, 23; root of tail, 59. Tail, length, 51. Ear, height, 30; breadth, 21. Leg, 24; hind-foot, 11; longest claw, 3.5. Wing from carpal joint, 97; Alar toe + cl., 11; claw, 4.

Accipiter cooperi. - Two alighted on the fence surrounding the parade-ground.

Cyanocephalus cyanocephalus. - One small flock seen.

Sayornis sayi. - Singing both in the air and when sitting. It has a peculiarly clear mellow disyllabic whistle, followed by a low trill, uttered pensively when sitting still on a perch waiting for something to turn up.

Oxyechus vociferus. - Its notes constantly heard as they fly about it having rained all night.

Amphispiza bilineata. - They roost every night in a cottonwood tree in our yard & sing at intervals during the night. Others roost under mesquite bushes upon the ground as the rear of the quarters.

Geothlypis trichas. - One old male.

Totanus ? - A small flock seen.

Oxyechus vociferus. - One seen. Noisier scarce.

Tringoides macularius. - Several seen.

- ✓3318. *Ceryle alcyon*. ♀ ad. 362; 570; 162; 105; cul., 58; gape 70.5; tars., 12; mte., 23; claw 9. Bare part of tibia anteriorly, 9.

- ✓3319. *Pyranga ludoviciana*. ♀ 187; 288; 40; 75; cul., 16.5; mte., 11; gape, 19; tars., 20; mte., 20; claw 6.

- 3319a. *Lepus callosus texianus*. ♂ juv. Young of the year. No. 128. Nose to eye, 52; ear, 85; occiput, 102; root of tail, 47.5; end of outstretched hind-leg, 77.5. Tail, from root to end of vertebral, 87; hairs, 125. Ears, height, 17.5; breadth, 8.5. Fore foot, 70; cl., 10. Arm, 114. Leg, 145; hind-foot 124; cl., 13. Distance between outstretched fore claws, 57.2.

3320

Sept. 15th, 1884. Fort Verde, Arizona.

3320. *Falco peregrinus neivaeus*. ♂ juv. 405; 945; 305; 170; cul. + cere, 26; cere, 9; culmen, 18.5; gape, 26; tarsus, 48; mte., 59; cl., 17.5. Iris, hazel. Cere, pale bluish-green. Bill, greenish-blue at base, shading into blue-black at tip. Tarsi & feet pale lemon yellow; claws black.

3321. *Accipiter cooperi*. ♀ juv. Capt. from feeding in doves and Orange-bellied Parakeets.

- 485; 850; 263; 245; cul. + cere, 26; cere, 13; cul., 17; gape, 29. Tarsus, 70; mte., 59; cl., 16. Iris, straw-color. Cere, greenish-yellow. Bill, bluish, dusky at tip. Tarsi & feet, lemon yellow. Claws, black. Stomach contained Gambel's quail.

- ✓3322. *Linumulus sparverius*. ♀ juv. 280; 610; 203; 142; cul. + cere, 16; cere, 4.5; cul., 12; gape, 19; tarsus, 36; mte., 32; cl., 10. Iris, hazel. Cere, lemon-yellow. Bill, pale blue at base, shading into blue black towards extremity. Tarsi & feet, orange-yellow; claws, black. Stomach filled with crickets.

- ✓3323. *Linumulus sparverius*. ♂ ad. 267; 575; 192; 132; cere + cul., 15.5; cere, 4; cul., 11.5; tarsus, 37; mte., 32; cl., 10. Iris, hazel. Bare space around eye, cere + skin at base of bill, bright orange-yellow. Tarsi

rust, orange-yellow; claws, black. Bill, pale blue at base of maxilla, yellowish-white at base of mandible, shading to blue-black at extremity. This is a fine adult bird, freshly moulted, the moult not quite completed. Young birds (of which I have three freshly killed specimens before me, ~~2♂♂~~ 2♂♂ at 1♀) may be readily distinguished by the color of the skin about the face (around eyes, base of bill & the cere), these parts being clear lemon-yellow in young of the year and orange-yellow in adults. The tarsi & feet are considerably paler orange-yellow in the young, and the bill is usually very much paler, the blue-black being restricted to the terminal portion of the upper mandible in most cases. The plumage is paler; the reddish-brown color of the breast being replaced by soiled white uniform with the throat, abdomen & under tail-coverts. The spotting of breast is ^{rather} indistinct the spots being obscured by the long silky tips of the overlapping feathers. The ~~lower~~ wing-coverts (especially the least) are faintly bordered with rusty. The specimens here described are, I believe, in the first autumnal plumage - not in 1st plumage. They were in families, accompanied by the parents.

3324. *Linumulus sparverius* ♂ juv.
265; 365; 188; 134; cul. & cere, (broken); cere, 4;
culmen, (broken); gape, 18; tarsi, 35; uita, 32; id., 9.5.
See above description of soft parts (under No. 3323).

3325. *Linumulus sparverius* ♂ juv.
275; 593; 200; 138; cul. & cere, 15.5; cere, 5;
culmen, 11; gape, 19; tarsi, 37; uita, 32; id., 9.
See under No. 3323 for description of soft parts.

3326. *Dendroica aestiva* ♂ ad. 135; 202.

3327. *Contopus richardsoni* ♂ ad. 154; 248.

3328. *Spizella breweri* ♂ ad. 146; 204.

Pipilo chlorurus. - First seen since Spring.

Sturnella cyanocephala. - One was shot and another one seen.
~~One seen~~. - A large flock seen.

Sept. 16th 1884. Fort Verde, Arizona.

3329. *Acapiter cooperi* ♂ juv.
475; 750; 230; 207; cul. & cere, 23; cere, 10.5;
cal., 15; gape, 24; tarsi, 61; uita, 49; id., 13.
Iris yellow. Cere & bare skin at base of bill,
yellowish-grey. Bill, pale blue at base, shading
into blue-black towards extremity. Tarsi and
feet greenish-yellow; claws black. ^{Stomach} ~~empty~~.

Aphelocoma woodhousei. - A number were
seen about the Henry Clay Mine.

Picus scalaris. - Not as numerous for a few
weeks past as hitherto, but during the last
few days one or two have been noted every day.

Colaptes auratus mexicanus. - A few are now
seen every day, but still scarce.

Salpinctes obsoletus. - One seen near the Henry
Clay Mining Company's camp.

Cathartes aura. - A large flock hang out
around the butcher-shop, and sit and
sun themselves in the cottonwood trees
along the Verde with their wings akimbo.

Corvus corax. - Also stay about the shambles.

Sept. 17th 1884. Fort Verde, A.T.
Ardea herodias. - Quite a number were
seen along the River.

Butorides virescens. - Several seen down
the Verde a mile or less from the Post.

Tyrannus vociferans. - Quite a number
were seen. They move about in families.

Gilbo shot two accidentally when firing
at a Red-tail Hawk (*Buteo calurus*).

Geothlypis trichas. - Several seen.

Icteria virens longicauda. - One seen.

Hirundo horreorum. - A large number seen.

Tachycineta thalassina. - Numerous.

Mimus polyglottus.

Pyrranga ludoviciana. - Feeding on grapes.

Ceryle alca. - One seen.

Sept. 18th, 1884. Fort Verde, Arizona.

- 3330 *Ardea herodias*. ♀ juv.
length to end of toes, 1385; length, 1040;
stretch, 1660; wing, 450; tail 167; cul., 119;
gape, 153; bare part of tibia 90; tars., 165;
nte., 117; claw 14.

~~Ardea herodias~~ ~~Ardea herodias~~

Heirudo ptychostrus. - Numerous to-day.
Sayornis sayi. - Several about the post.
Astragalinus psaltria. - This species in very
plentiful and in full song in some
extensive beds of wild sunflowers adjoining
the garden.

Genædura carolinensis. - A nest containing
young only a few days old was found
in a mesquite bush in the Verde bottom.

Sept. 19th, 1884. Fort Verde, Arizona.

- 3330^a *Tamias harrisi* (Aud. & Bach.) Allen. ♂ ad.
No. 129. Nose to eye, 18; ear, 36; occiput, 46; root of tail,
147; end of outstretched hind leg, 228. Tail, from
root to end of vertebrae, 70; hairs, 93. Ears, height,
13; breadth, 13. Arm, 25; fore-arm, 25;
fore-foot, 23; its longest claw, 6.5. Leg, 40;
hind-foot, 25; its longest claw, 6.5.

- 3330 *Tamias harrisi* (Aud. & Bach.) Allen. ♀ juv.
No. 130. Nose to occiput, 43; root of tail, 144. Tail from
root to end of vertebrae, 70; hairs, 95.

- 3330^a *Mus musculus*. Not skinned. juv.
Nose to occiput, 21; root of tail, 68; Tail, 70.

- 3331 *Geothlypis trichas*. ♀ ad.
140; 180; 56; 56; most, 8; gape, 14.5;
tarsus, 20.5; nte., 18; cl., 5. Iris, hazel. Bill

- 3332 *Contopus richardsoni*. ♂ juv. 167; 270.

- 3333 *Oxyechus vociferus*. ♀.
260; 300; 156; 107; cul., 20; gape, 23;
tarsus, 55; nte., 26.5; cl., 6; bare part
of tibia, 19.

- 3334 *Limnunculus sparverius*. ♂ juv.
277; 370; 195; 138; cul. + cere, 15; cere, 4.5;
culmen, 12; gape, 17.5; tars., 37; nte., 32; cl., 8.5.

Sept. 20th, 1884. Fort Verde, Arizona.

- 3335 *Circus hudsonius*. ♀ juv. Stomach contained small birds.
540; 1210; 382; 275; 31; cere, 14; cul., 18.5;
gape, 35; tarsus, 86; nte., 55; cl., 19. Iris, hazel.
Ire, greenish-yellow. Bill, blue at base, shading
into blue-black. Tarsi & feet, lemon-yellow. Claw, black.

- 3335^a *Yellow-striped Snake*. ♂ ad. This specimen was
captured alive but severely injured, on August
24th, 1884, and has been kept in a nearly tight
wooden box without food ever since. When taken
out to-day and killed it was lively & apparently
had not suffered much from confinement and
lack of any food. There are 25 rows of scales,
and 219 ventral plates. Preserved in a skin.

- 3335^b *Dipodomys chapmani* (Mearns) "Kangaroo Rat." ♀ juv.
No. 131. On September 4th I caught this yellow alive, it
being quite young. It uttered a loud and singu-
-lar cry, which attracted my attention and excited
my curiosity; after looking about for the thing
for some time, I at length discovered it sitting
doubled up in a heap at my feet, right in front
of a burrow in which it doubtless lived. I placed
my ample foot, encased in a Gort boot upon the
hole and soon secured this miniature Kangaroo
and shut it up in a tin bait box. I have kept
it in confinement ever since; and it seemed
to thrive well upon a diet consisting exclusively
of fat pork and Indian meal. During the
day it slept most of the time, lying flat
upon its side like a Jack Rabbit, but springing
to its feet with agility whenever any person
looked into its box. At night its constant
amusement was leaping up and bumping
its head upon the glass of its prison, and
in this was so persistent that its crowing

denuded of hair & made sore by the contact. At my wife's request I ended this existence to-day, and had much difficulty in removing the pork grease from its pretty pelt, before placing the specimen in my cabinet. The enormous head of this little creature, reminded me of a *Lease of Chaonia hydracephalus*.

Sept. 20th 1884. Fort Verde, Arizona.

- 3335-C. *Mus musculus* ♂ ad. Immature? No. 132. Nose to occiput, 24; root of tail, 80. Tail, 92. Lint. Maus, Mr. Headfield & myself took our rifles & rode up on the mesa in search of Deer. On the mesa, were a few Plain Titmouse (*Lophophanes inornatus*), Black-throated Sparrows (*Amphispiza bilineata*), Blandings Finch (*Passilo chlorurus*), Gambel's Quail (*Lophortyx gambeli*), *Spizella breweri*, Cooper's Hawk (*Accipiter cooperi*), Sharp-shinned Hawk (*Accipiter fuscus*), Turkey Buzzard (*Cathartes aura*), Crissal Thrasher (*Geothlypis trichas*), and Great Horned Owl (*Bubo virginianus*).

Riding up the mountain; on the east bank of the Verde River, we saw a Road Runner (*Geococcyx californianus*) running up the big hill. It ran up the white limestone road with incredible speed, and, although we aimed at them no one ventured a shot as it did not stop, but skinned up the hill to the very top, then ran down the cliff, and, as we came up, soared off from the top of a high, vertical cliff, then flapped vigorously and alighted perhaps 500 yards from the place it started from. Lint. Maus saw two others yesterday, down the valley.

Mr. Maus Headfield saw one doe in the bed of Beaver Creek; but I was in a different direction & saw no Deer.

3336. *Ceryle alcyon* ♂ ad. 337; 565; 156; 102; culmen, 58; gape, 71; tarsus, 12; mte., 24; cl., 9; bare part of tibia anteriorly, 12. Iris, hazel. Bill, blue-black maxilla horn-color (or bluish horn-color) at base laterally and mandible the same color at base. Extreme tip of both mandibles, horn-color. Bare part of tibia brownish flesh-color, shading darker to toes & claws which, are black, the inner expanded process of middle toe claw, horn-color. Tarsus purplish-brown; feet, purple below dusky purplish brown on toes at base, becoming black about the middle. An old male with perfectly pure "blue" bill (the feathers of course, slightly edged with white) (the legs, *Probitinga anthracina*). - One sitting in a cottonwood, *Crax rubra*.

- Sept. 22nd, 1884. Fort Verde, Arizona. 3337. *Lophortyx gambeli*. ♂ ad. Autumnal moult completed. This is the first of the many dozens lately examined in complete new plumage. 290; 377; 112; 102; cul., 11.5; nost., 8; gape, 14.5; tarsus, 34; mte., 39; cl., 9.5. Iris, hazel. Bill, black. Tarsi & feet, brownish-plumbeous; claws, dusky. Crop filled with wheat (cutthroated), seed of *Oselepias*, ants, buds & purple flowers, and a quantity of minute seeds. *Probitinga anthracina* (Licht.) Lafr. (Antthraxite Hawks) *Crax rubra*. - One of the Harris's Buzzards, was seen sitting upon the ground on the bank of the Verde, apparently unoccupied with any particular pursuit. A shot was fired at it, when it flew away.

- Sept. 23rd, 1884. Fort Verde, Arizona. 3338. *Gymnospiza cyanocephala arizonae* ♂ ad. 298; 470; 149; 112; cul., 34; gape, 38; tars., 40; mte., 34.5; cl., 10. Iris, hazel. Bill, tarsi and feet, black. 3339. *Gymnospiza cyanocephala arizonae* ♀ ad. 284; 455; 140; 113; cul., 35; gape 37; tarsus, 38; mte., 28.5; cl., 8.5. Colors as above.

✓ 3340. *Picus stricklandi* ♀ ad.
182; 332; 104; 72; culm., 20.5; gape, 23;
tars., 18.5; mte., 20; cl., 8.5. Irides, red.
Bill, plumbeous-black. Tarsi + feet, plumbeous;
claws, black.

3341. *Butorides virescens*. ♀ ad. Length to end
of claws, 610; end of tail, 487; 743; 200; 75;
cul., 61; gape, 80; tarsus, 54; mte., 59;
claw, 10; bare part of tibia, 20. Irides yellow.
Bill with maxilla blackish; yellow along
sides; mandible, yellow; blackish at base
and tip along sides. Bare skin about eye
and head, bright greenish-yellow. Bare part
of tibia, tarsi + feet yellow, ^{observed to be} marked with
dusky anteriorly, claws, dusky. Shot
on the wing. Flew afterwards a long way &
then hid in the brush along shore. It was
excessively fat.

3342. *Accipiter cooperi* ♀ juv.
485; 850; 262; 240; cere + cul., 27;
cere, 12; cul., 18; gape, 27; tarsus, 66;
mte., 60; cl., 17. Irides, yellow. ^{Stomach contents} ~~marked~~ with
Shot while after some birds near a house.

3343. *Ceryle alcyon* ♀ ad.
347; 543; 175; 107; cul., 59; gape 74;
tars., 14; mte., 25; claw 9; bare part of tibia 11.

3344. *Ceryle alcyon*.
337; ~~560~~ 560; 162; 103; cul., 60; gape 75;
bare part of tibia, 9; ¹⁶² tars., 12; mte., 25; claw, 10.

✓ 3345. *Ceryle alcyon*. ♂
340; 565; 162; 103; cul., 59; gape, 72;
bare part of tibia 10; tars., 11.5; mte., 23.5; claw, 9.

3346. *Ceryle alcyon*
336; 579; 166; 102; cul., 56; gape, 72;
bare part of tibia, 11; tarsus, 13; mte., 25; cl., 9.

✓ 3347. *Colaptes auratus mexicanus* ♂ ad.
330; 535; 170; 126; cul., 38.5; gape, 42;
tarsus, 27.5; mte., 32; cl., 11. Irides, reddish-
brown. Bill & claws, neutral tint; tarsi +

stomach filled with grapes.

✓ 3348. *Querquedula carolinensis*. Sex not noted.

386; 625; 190; 82; cul., 38; gape, 45; tars., 33;
mte., 43; cl., 8. Irides, yellowish-brown. Bill,
olive-brown, paler + fleshy below, shading into
black terminally above. Tarsi + feet plumbeous-
gray, with joints, webs + claws, dusky. Peculiar spec.
of female dress by entire under surface spotted. Perhaps 2 juv.

Sept. 24th, 1884. Fort Verde, A.T.

To-day was spent at a picnic on Beaver Creek.
While fishing, a splashing sound was heard
among some bushes and dead branches in the
side of the stream a few feet from me. I
went to the spot, and a Reddish Egret flew
across the creek and alighted. It then flew down
stream + alighted within a few feet of the place
where I was then fishing, and stood on one
leg looking at me with its little neck constantly
in motion for a long time. In the course of an
hour I procured a gun and shot it a few
rods up stream from where I had left it. It
was running about in the shallow water
striking at small fishes with its beak, and
was very gentle. It is the first one I ever saw.

3349. *Ardea herodias*. ♀ Reddish Egret.
Length to end of claws, 880; length, 640; 930; 250;
85; cul., 95; gape, 110; maxilla 6.5 longer than
mandible; bare part of tibia, 71; tarsus, 96;
mte., 75; cl., 11. Irides, straw-color. Bill, with
mandible, maxilla laterally at base + a narrow
line extending two-thirds to the point, yellow;
residue ^{maxilla} yellowish-brown at base, becoming black
towards tip; which (extreme tip) which is horn-color.
Bare part of tibia, tarsi + feet, bluish-gray;
becoming dusky ^{anteriorly} on tarsi below knees, and
extending thence to dorsal extremity of toes.
Claws, ^{pale} fleshy-brown. Bare skin about face,
bright yellow. Under surface of wings, except
inner feathers, entirely pure white.

- ✓3350. *Tringoides macularius*. ♂ juv.
 length to end of claws, 220; length, 188;
 323: 99: 52: cul., 24: gape 27: bare part
 of tibia 13: tars., 25: Mtc., 23: claw 4.
Geothlypis trichas. - Several seen.

Sept. 25th, 1884. Fort Verde, A.T.

To-day I was obliged to kill my two pet
 Hawks, as I am ordered to accompany
 Genl. Crook on the trip to San Carlos,
 and during my absence they could
 not be supplied with food.

3351. *Buteo calurus*. ♀ juv. Young of the year.
 575: 1350: 415: 265: cul., + cere, 37: cul., 26.5:
 cere, 16: gape 45: tars., 87: Mtc., 67: claw 25.
 Iris light hazel - cere pale yellowish green. Bill
 pale blue at base shading terminally into
 blue black at on both mandibles - tarsi +
 feet greenish yellow - claws blue black.

3352. *Buteo calurus*. ♂ juv.
 553: 1285: 335: 255: cul., + cere, 36: cul., 25:
 cere, 15: gape 43: tars., 88: Mtc., 67: claw 23.

Sturnella coturniculus (Cotton-tail).
Sturnella chlorurus. - Now numerous, and
 utter a note like the Catbird (*M. carolinensis*).

- ✓3353. *Oxyechus vociferus*. ♀ ad.
 267: 515: 161: 111: cul., 20: gape, 23: 5:
 tarsus, 38: Mtc., 28: cl., 6.5: bare part of tibia 11.
 The middle tail-feathers are clean-cut + free from
 the soft elongated tips which young birds
 (exclusively??) possess. Iris, hazel; eyelid
 bright red. Bill + claws, black. Bare part
 of tibiae, tarsi + feet, flesh, tinged with yellowish brown.

Sept. 26th, 1884. Fort Verde, Arizona.
 Leaving. Learned that I am invited by
 Genl. Crook to accompany him on his tour
 of inspection, to be absent about 30 days,
 I take this opportunity, before leaving the
 Verde, to write up a few notes on the
 fall migration, etc. -

1. *Merula migratoria propinqua*. - Not a Robin
 has been seen since early spring.
2. *Oroscoptes montanus*. - Common where the
 wild grape grows. It feeds on grapes.
3. *Geothlypis trichas*. - Still present.
4. *Sialia mexicana*. - None have yet appeared
 in the Verde Valley. On Sept. 1st I saw a
 number on Cherry Creek, within ten miles
 of this place. They possibly may breed there.
 They were in the pines.
5. *Sialia arctica*. - None have yet arrived.
6. *Regulus calendula*. - None have yet been seen.
7. *Lophophanes inornatus*. - A few seen, Sept. 21st,
 hunting Deer on the mesa east of the Verde.
 They were, as usual, in the cedars.
8. *Psaltriparus caerulea*. - Not seen recently.
9. *Auriparus flaviceps*. - Not seen recently.
10. *Sitta pygmaea*. - Seen on Cherry Creek, Sept. 1st.
11. *Sitta carolinensis*. - Not seen recently.
12. *Salpinctes obsoletus*. - A number were heard
 Sept. 20th in the Cañons east of us. Have
 not visited their haunts since then.
13. *Catherpes mexicanus conspersus*. - Not
 seen recently; but this is probably because I
 have neglected their abodes in the rocky
 cañons and cliffs.
14. *Eremophila alpestris*. - Last
 observed on Sept. 20th, but they have doubtless
 been present + abundant since. Lately, my
 walks have been chiefly beside the
 Verde River, and the upland birds
 have not been much observed of late.

15. *Helminthophaga luciae*. - Not seen recently.
16. *Helminthophaga virginiae*. - Only seen at the Grand Cañon of the Colorado, where one was shot.
17. *Helminthophaga celata lutescens*. - Not seen since spring.
18. *Dendroica aestiva*. - Not seen since Sept. 22nd. They have rapidly decreased in numbers since the second week in September, when the species was exceedingly plentiful.
19. *Dendroica nigrescens*. - Not seen since spring.
20. *Dendroica auduboni*. - Not seen since spring.
21. *Geothlypis trichas*. - Still present in some numbers in the vicinity of water.
22. *Geothlypis macgillivrayi*. - One or two seen nearly every day up to date, since the first one was shot, this autumn, on Sept. 8th.
23. *Icteria virens longicauda*. - One or two were seen to-day (Sept. 26th). It has not been observed for a week or two past; but this is perhaps owing to its excessive shyness at this season, whereas, in summer it is often very bold. It is also nearly silent now, and found in thickly tangled grape-vines, off on the point of which it probably feeds, as do so many other birds at this season.
24. *Myiodytes pusillus pileolatus*. - Not noticed at all since spring.
25. *Pyranza ludoviciana*. - Still present and feeding upon wild grapes in some numbers.
26. *Heimdo erythrogastra horreorum*. - A good many were seen to-day; and the species is seen every day about the corrals.
27. *Tachycineta thalassina*. - A few were seen to-day; but none had been seen for the past few days. They will doubtless all be gone in a few days, if, indeed, any more are seen.
28. *Petrochelidon lunifrons*. - Not seen for some days past. Last noted on September 10th.
29. *Stelgidopteryx serripennis*. - Not seen since August.

30. *Progne subis*. - Not seen since spring at Whipple.
31. *Antipellis cedrorum*. - The first and only one was seen to-day, beside the Verde River. Its well-known note was heard, and, on looking up, I saw a single bird flying close over my head. I could see the yellow band across its tail, and its flight and note were unmistakable.
32. *Phainopepla nitens*. - This bird was plentiful during the first week or ten days in September. They were feeding in numbers upon grapes on Barrer Creek. It was last seen on Sept. 13th. I have visited the locality a number of times lately, since the 13th, and have failed to see any, and conclude that the species must have departed forthwith.
33. *Vireo gilvus swainsoni*. - The one shot on the 8th of September is the only one I ever saw.
34. *Vireo solitarius*. - Has not been seen since spring.
35. *Vireo vicinior*. - Not seen recently.
36. *Vireo pusillus*. - Last seen Sept. 10th. Last heard singing the same date.
37. *Lanius ludovicianus excubitorides*. - Still present. Frequently heard singing of late.
38. *Geothlypis vespertina*. - Not seen lately. Have never seen but one, and that in Copper Cañon some months ago.
39. *Carpodacus frontalis*. - Large numbers are seen everywhere. Frequently singing during the past fortnight.
40. *Astragalinus platyrrhynchus*. - This bird is found in large flocks wherever the large wild sunflowers grow and especially beside the Verde River. They usually choose to alight upon dead trees or branches and they sing pleasantly at this season.
41. *Passerculus*. - One was shot at Ash Fork, A.T. on March 17th, 1884. The species was seen at Verde last spring, beside the Verde River. This autumn I have seen

- but one specimen (No.) on
42. *Podiceps granivorus confinis*. - This species has just begun to arrive. The first were seen on Sept. 22nd.
43. *Melospiza fasciata*. - Still present in numbers, but only in the immediate margin of streams. Not heard singing very lately.
44. *Peucaea*. - Not seen lately.
45. *Amphispiza bilineata*. - Not seen for a day or two past. Its numbers have greatly decreased within past two weeks. Last noted September 21st, when a few were seen on the high mesa east of us.
46. *Junco*. - None seen since Spring in the Verde Valley; but, on Sept. 1st, I thought I heard a *Junco* on Cherry Creek, about ten miles west amongst the pines.
47. *Spizella domestica arizonae*. - Not positively identified as seen here lately; but without doubt numbers of the *Spizellas* seen in flocks about the rancher's gardens belong to this species, but I neglected to shoot and positively identify more than one or two specimens if they happened to be the following species:
48. *Spizella breweri*. - Present in great numbers, unless most of those seen are really *S. arizonae*.
49. *Spizella atricularis*. - Not seen very recently.
50. *Zonotrichia*. - The first arrived here on Sept. 22nd, and they are now numerous.
51. *Chondestes grammacus*. - None have been noticed for several weeks past.
52. *Calamospiza bicolor*. - Having paid little attention to birds of this family of late & not having made a point of visiting the special localities which they affect, I have doubtless allowed some important notes on migration to escape. I have only

- seen this species once since Spring. On Sept 1st, I fired into a flock, in the Valley, and got two.
53. *Spiza americana*. - I saw what I thought to be a young bird of this species on Mr. Brown's ranch on the 22nd of September. Aside from this I have only seen the specimen collected (No. 3182) on August 8th, shot in a dense growth of tall sunflowers.
54. *Zamelodia melanocephala*. - Not seen for a week or two past.
55. *Spizella coerulescens*. - It has been seen weeks since this thrush was last seen.
56. *Passerina amoena*. - Not seen for some time past.
57. *Pipilo maculatus megalonyx*. - Last seen on the 21st of September. It does not frequent the River bottom, and, hence, may still be abundant in the hills, which I have not visited since the above date.
58. *Pipilo fuscus mesoleucus*. - A very few have been seen of late in the River bottom and one (No.) was shot in the rear of my quarters.
59. *Pipilo aberti*. - Still very common in the Verde bottom. One note like the Robin.
60. *Pipilo chlorurus*. - Rather scarce, but seen every day, in all situations since Sept. 15th, on which date I shot the first specimen. ^{It uttered a note resembling a catbird's or Maximilian's Jay.}
61. *Molothrus ater obscurus*. - This species was seen in good-sized flocks about the corals up to the first week in Sept., since which none have been seen. The young associated by themselves, separate.
62. *Agelaius*. - Not seen since Sept.
63. *Sceloporus cyanocephalus*. - Small flocks arrived about the corals, and have since been rapidly increasing in size.
64. *Xanthocephalus heterocephalus*. - They all left this region late last Spring.

- During the summer a single bird (young or female) alighted in our yard. No others have yet been seen.
65. *Sturnella neglecta*. - This species bred sparingly in this immediate neighborhood, and more plentifully in certain suitable localities within a few miles. They have not yet dispersed over the Valley, and have not been seen in the vicinity of the Post this autumn; but were very plentiful here last spring.
66. *Icterus bullocki*. - All departed early in September.
67. *Icterus cucullatus*. - Not seen since September 8th, when two were shot.
68. *Icterus parisorum*. - Not seen very lately - last several weeks ago.
69. *Corvus corax*. - Seen every day.
70. *Myiarchus cinerascens*. - Appeared in large, noisy flocks early in September and have been seen nearly every day since in large flocks on wing.
71. *Cyanocitta stelleri maculosa*. - Not seen since my last trip from Whipple several months ago.
72. *Aphelocoma woodhousei*. - Common & resident throughout the year in the hills surrounding us, but never descending to the river bottom.
73. *Tyrannus verticalis*. - None have been seen since Sept. 15th.
74. *Tyrannus vociferans*. - None seen since Sept. 17th.
75. *Myiarchus*. - Last seen on Sept. 19th.
76. *Sayornis sayi*. - Still common
77. *Sayornis nigricans*. do.
- Contopus richardsoni*. do.

- 78, 79, & 80. *Euphonia* sp. - Several species of *Euphonia* are still present; but *E. fusca*, our common summer resident has not been seen for a week or two past.
81. *Pyrocephalus rubinus mexicanus*. - Still present in small numbers.
82. *Chordeiles acutipennis texensis*. - A single one was the last seen on the night of Sept 22nd.
83. *Phalaenoptilus nuttallii*. - One seen and heard Sept 12th was the only one seen since early summer.
84. *Trochilus alexandri*. - Last seen Sept 21st.
85. *Telasphorus rufus*. - Last seen Sept 13th.
86. *Ceryle alcyon*. - First seen this autumn in Sept. and still as numerous as in the East.
87. *Panyptila saxatilis*. - Not seen since to Sept. when last noted in my journal. The species was first seen on Sept 1st on the way from the top of Copper Canon to Hudson on Ash Creek. A few days later they became exceedingly plentiful in the Verde Valley, flying with the Violet-green Swallow.
88. *Geococcyx californianus*. - Occasionally seen.
89. *Geococcyx americanus*. - Not seen recently.
90. *Picus villosus harrisi*. - Only seen at Whipple.
91. *Picus scalaris*. - Seen nearly every day.
92. *Sphyrapicus varius nuchalis*. - At Ash Fork, March 17th, 1884, I found a few on the cedars. None have since been seen until to day when one was seen near the Verde River.
93. *Melanerpes formicivorus*. - One seen to-day in the Cottonwoods beside the Verde River.
94. *Colaptes auratus mexicanus*. - Has become plentiful & generally dispersed in the Valley.

95. *Aluco flammeus palineola*. - Not seen, but occasionally heard, since I found the nest & secured a young bird on (No. 1).

96. *Bubo virginianus*. - One seen to-day, and, indeed, it has become rather common. Sometimes seen in pairs, sometimes single. Often heard at night.

97. *Scops trichopsis*. - Not seen or heard here since the specimen was shot in a cave on Beaver Creek, early in the summer. The species is said to be common & resident.

98. *Glaucoedon gnoma*. - I have only seen one at Whipple last March; but a rancher here in the Valley tells me he has seen & shot specimens on Clear Creek about six miles from the Post.

99. *Speotyto curicularia hypogaea*. - One small colony about five miles up the Valley, and others ten or fifteen miles up. Have not visited them for some weeks past.

100. *Circus cyaneus hudsonius*. - Marsh Hawks were seen early last spring; but none were observed during the summer. The first one seen this autumn (No. 3258) was shot August 27th. The species probably breeds near here.

101. *Accipiter fuscus*. - This species was seen occasionally throughout the summer. The fall migration began early in September, and the species has been abundant since August. They frequent especially the thickest growth of cottonwoods beside the stream, capturing their prey along the borders, sailing low over the water and under the branches of the trees, rising abruptly to alight amongst the thickest foliage, where they are perceived only with difficulty. They will sit off the

shadows, unobserved, while you are looking for them where they were seen to alight, descending and soaring swiftly away among the tree-trunks, between the branches.

102. *Accipiter cooperi*. - Has been plentiful since August 22nd, when the first specimen was taken since last spring. I do not remember to have noticed any during summer; but have no doubt but the species breeds plentifully in this region. They are very destructive to poultry. Even the young of the year will attack and worry old hens and nearly grown Turkeys, "herding" them in to the yard from the fields one at a time, "as a rancher expressed it to me. He had killed a dozen or more in the act. He also shot a Marsh Hawk (*Circus hudsonius*) driving his chickens and Turkeys in to the house. I myself saw a Marsh Hawk dashing at some hens apparently amusing himself by frightening by continually swooping down at them.

103. *Falco mexicanus*. - A number of these birds, in very light plumage, were seen about the Post when I first arrived in last March. One was shot in the room of the landress's quarters, and I saw it and pulled out the rectrices and remiges, it being too old for skinning. None have been seen since last spring.

104. *Falco peregrinus*. - These birds were seen during the summer, and a young male and female were preserved. They are seen nearly every time I go up Beaver Creek or up the Verde, and breed on Beaver Creek, without doubt.

105. Falco sparverius. - Very abundant. Families remain together often all alighting on one tree. The species is an abundant summer resident.
106. Buteo borealis calurus. - Quite common. On Sept. 1st numbers were seen perched upon the tall pines in Cherry Creek.
107. Buteo abbreviatus. - Only seen at rare intervals. Last spring it was seen more frequently, and one specimen (No.) preserved.
108. Buteo swainsoni. - The most abundant Buteo. Seen nearly every day. It is a summer resident, and breeds.
109. Urubitinga anthracina. - A few spent the summer here; but not recognizing this rare species, never before actually recorded as taken in North America north of Mexico, I made no special effort to secure a specimen. The bird was always seen singly, usually perching in the thickest foliage of a willow or cottonwood close beside the Verde River or the Sevier, and not observed until it flew, when it always escaped by darting behind the foliage of a willow or cottonwood, and, although several times fired at, it never fell to these snaf-shots until to-day (Sept. 26th, 1884), when I secured a magnificent adult female that was very fat, and a fierce and powerful Hawk. Although hard hit, it tried to keep on flying, but soon fell into the water. It made a vigorous effort and reached the shore, and then ran swiftly, half leaping and half flying. When I tried to catch up with it, it repeatedly dashed into the stream and crossed to the opposite side, but was finally overtaken, when it fought desperately and was marvellously active and plucky. A few days ago, when hunting especially for this bird, I saw it flying and have never seen a Hawk

- fly move easily and powerfully. When flushed from their perch their flight is exceedingly swift, especially considering its breadth of wing & shortness of primaries.
110. Pandion haliaetus. - This is a summer resident and breeds, but not plentiful except during the spring migration. One was seen to-day.
111. Aquila chrysaetus. - A few were seen last spring, mostly during April. Not seen recently.
112. Cathartes aura. - An abundant permanent resident; breeds. Roosts in the cottonwoods near the slaughter house beside the Verde.
113. Columba fasciata. - A few summered twenty miles up the Verde. They breed in Cherry Creek a dozen miles from here. Genl. Crook shot one in April sixty miles east of Verde. Have never seen it myself.
114. Melopelia leucoptera. - The single bird seen by me near the Post last spring is the only one; and the settlers do not seem to know the bird at all; so I presume it to be rare.
115. Meleagris gallinavo. - Plentiful in the mountains east of Verde, within say fifteen or twenty miles. Having never had an opportunity of visiting the region, I have never yet seen the Mexican Wild Turkey.
116. Lophortyx gambeli. - Exceedingly abundant.
117. Cyrtonyx massena. - Quite a colony resides at the Point of Rocks four miles from Prescott. I saw several there and shot one but failed to recover it. They are said to be in some numbers about the top of the range of hills bordering this Valley. I have never been where they occur in this vicinity.

Canis macrotis - When I went to Arizona, I did not know ^{the} deer-track from a semicolon; but I soon learned to track a wounded deer for miles by a few scattered drops of blood and an occasional niprint of its hoofs.

Sept. 26th - Continued - Ft. Verde, A.T.

3354. Urubitinga anthracina (Licht.) Laf. ♀ ad.
Autumnal moult almost completed. Irides, hazel.
Bill, pale yellow at base shading through light
plumbeous to blue black terminally. Bare skin
along gape, between eye and bill and cere
pure bright yellow. Tarsi and feet, yellow;
claws, blue-black. ^{Dip. L. at cere 18; width of L. at cere 15;}
at gape 28; 560: 1330: 400: 262: cul., + cere, 40: cere, 16: cul.,
28: gape 42: tibia, 117: tars., 88: Mte., 66: claw 24:
hind claw, 27: inner claw, 25: outer claw 18.5. ^{Stomach} contained frog.

3355. Gallinago wilsoni (Lemm.) Bonap. ♂ ad.
Irides, dark hazel. Bill, brownish-black, with an
olive tinge. In lower mandible, below for
one-half of its length. Tarsi & feet ^{dusky} greenish;
claws, blackish. Length to end of claws 340:
285: 443: 133: 67: cul., 67: gape 64.5: bare
part of tibia, 11.5: tars., 33: Mte., 41: claw 8.
tail feathers, 16.

3356. Gallinula galeata (Licht.) Bp. ♀ ad.
Iris hazel - bill olive at base - a band of
dark red anterior to nostrils on maxilla
residue greenish yellow - mandible olive
at base - shading to greenish yellow at
tip - tibiae & circled below feathers by
a band of bright orange red - this band
restricted internally; externally, 14 mm.
in extent - tarsi, residue of tibiae & feet,
bright sap green - interior surface of feet
grayish - claws neutral tint.
Length to end of claws, 510: Length, 375:
605: 190: 88: bill from front of feathers, 40:
from nostril, 15: gape, 29: tibia, 28: tars., 56:
Mte., 81: claw 15.5.

3357. Cathartes aura. ♂ juv.
635: 1635: 487: 263 (a ^{prolongation} of the shaft of tail the rectrix extending 12 mm.
further: cere, 31: cere + cul., 56: cul., 24: gape 50:
tars., 63: Mte., 83: claw 21. Irides, hazel.

Oct. 29th Fort Verde, A.T.

To-day, we all went up to see Montezuma's Well, twelve miles from Fort Verde, on Beaver Creek. The well is a circular depression, perhaps 100 feet deep with nearly vertical walls, in which are numerous caves and excursions made by the Aztec races, and walled up in front. Some of them appear to be large, natural caverns, with divisions into apartments by means of walls. At the bottom of the depression is a large, deep pool of water which empties into Beaver Creek by a subterranean channel, constituting quite an important tributary to Beaver Creek. The water is cold, and is, in reality, an immense spring. ^(Kinostemon sonoriense De Costa) ~~Purples~~ are numerous in it and it is surrounded by a belt of Cat-tails, tules, and grasses or sedge averaging about ten feet. In this, the Marsh Wrens (*Telmatochlamys palustris paludicola*) were numerous and singing. There is as much difference between the song of this bird and the Eastern variety as between the songs of the Eastern and Western Song Sparrows; but one would at once recognize it as a Song-billed Marsh Wren from its song.

In this singular place were found several other species of birds, as follows: -

Lophortyx gambeli. - A flock of a dozen, two of which were shot. The rest flew up the perpendicular wall to the top of the well, where Capt. Riddet shot some more of them.

Melospiza melodia. - Several in the border of the pool.

Cathartes mexicanus conspersus. - Several were singing in the rocky wall of the well.

Regulus calendula. - One.

The birds seen to-day were: -

1. *Regulus calendula*
2. *Calpurnius obsolatus*

3. *Lanius ludovicianus excubitorides*. - Several.
4. *Carpodacus frontalis*.
5. *Astragalinus psaltria*. - The specimen shot could not have been out of the nest more than a fortnight, showing that this species breeds late in the season, or irregularly like the *Astragalinus tristis* of the Eastern United States.
6. *Zonotrichia leucophrys*. - Abundant; singing.
7. *Junco hiemalis annectens*. - Common along Beaver Creek.
8. *Pipilo aberti*. - Abundant.
9. *Pipilo maculatus megalonyx*. - One on Beaver Creek.
10. *Melospiza fasciata*. - On Beaver Creek.
11. *Eremophila alpestris*. - In flocks.
12. *Scolecophagus cyanocephalus*. - At the Post.
13. *Sturnella neglecta*. - Common.
14. *Corvus corax*.
15. *Picus scalaris*.
16. *Colaptes auratus mexicanus*. - Common.
17. *Sayornis sayi*. - Several seen.
18. *Linumulus sparverius*.
19. *Accipiter fuscus*. - One on Beaver Creek. It was extremely bold and audacious.
20. *Buteo borealis calurus*. - Common.
21. *Lophortyx gambeli*.
22. *Zenaidura macroura*. - Now quite scarce in the Verde Valley. About 20 seen on Beaver Creek.
23. *Ardea herodias*. - Seen on Beaver Creek and Verde River.

✓ 3471. *Telmatochlamys palustris paludicola* ♂ ad.
140; 179; 54; 55; nost., 11; gape, 18.5; tars., 21.5; mte., 17.5; cl., 5. Irides, hazel. Bill, with maxilla brownish-black, lined just appreciably with flesh-color along gape; mandible flesh-color, at base, tipped and narrowly lined laterally with brownish-black. Tarsi and feet, dark brown; claws, brownish-black.

✓ 3472. *Telmatochlamys palustris paludicola* ♂ ad. ♂
139; 175; 55; 56; nost., 10; gape, 18; tars., 21;

- note, 14; cl., 5. Colors as above.
13473. *Amalodytes palustris pallidicola* ♀ ad. Montezuma Well.
137; 183; 55; 56; nost., 10; gape, 18; tars., 20.5
note, 18.5; cl., 5. Colors as above.
13474. *Astragalinus psaltria* ♂ juv. 109; 192. Verde.
13475. *Sayornis sayi* ♂ ad. Montezuma Well.
197; 333; 107; 88; nost., 12; gape, 22;
tarsus, 21.5; note, 18; cl., 6. Irides, hazel.
Inside of mouth, yellow. Bill, tarsi feet & claws, black.
13476. *Melospiza fasciata montana*. Hensh. ♂ ad.
178; 232; 71; 82; cul., 13; gape, 13.5;
tars., 24; note, 22; cl., 6. Montezuma Well.

Oct. 30th. Fort Verde, A. T.

Sayornis sayi. - About the hospital. Utters a low, sweetly modulated whistle.

Salpinctes obsoletus. - One was seen carefully examining the roof and chimneys in a roof piazza, moving slowly about, careless of our observation.

Lophortyx gambeli. - A number were running about the quarters and parade, and calling in a sad, wailing manner to each other. Lieut. Morgan killed one by carelessly shying a stone towards it.

Oct. 31st. Fort Verde, A. T.

Accipiter fuscus. - Flying over the parade while inspection was going on.

Picus scalaris. - In cottonwoods in the post.

Scolecophagus cyanocephalus.

Sturnella neglecta.

Corvus corax.

Salpinctes obsoletus. - About the quarters.

November 1st, 1884. Ft. Verde, A. T.
This afternoon walked a couple of miles up the Verde River and thence across to Beaver Creek and down Beaver to the Post. The birds seen were:

1. *Oreoscoptes montanus*.
2. *Harporhynchus crissalis*.
3. *Regulus calendula*.
4. *Salpinctes obsoletus*. - One about the quarters.
5. *Dendroica auduboni*.
6. *Taninus ludovicianus eximiorides*.
7. *Carpodacus frontalis*.
8. *Astragalinus psaltria*.
9. *Lonotrichia leucophrys*.
10. *Melospiza fasciata*.
11. *Pipilo aberti*. - Abundant.
12. *Pipilo chlorurus*. - One on the bank of Verde River.
13. *Scolecophagus cyanocephalus*.
14. *Sturnella neglecta*.
15. *Corvus corax*.
16. *Sayornis sayi*.
17. *Sayornis nigricans*. - Two were seen on Beaver Creek.
18. *Ceryle alcyon*. - One on Beaver Creek.
19. *Picus scalaris*. - Numerous.
20. *Colaptes auratus mexicanus*. - Common.
21. *Falco peregrinus*. - One seen.
22. *Spinunculus sparverius*. - One or two seen.
23. *Accipiter cooperi*. - A fine adult female.
24. *Accipiter fuscus*.
25. *Buteo borealis calurus*.
27. *Zenaidura carolinensis*. - Several seen.
28. *Lophortyx gambeli*.
29. *Oxyechus vociferus*. - One on Beaver Creek.
30. *Ardea herodias*. - Several seen on Beaver Creek and on the Verde River.
31. *Mergus serrator*. - Three shot from a small flock.
- Mammals*.
1. *Lepus callotis texianus*. - One shot.
2. *Lepus sylvaticus* ^{arizonae major} ~~multicinctus~~. - One shot.
3. *Spermophilus grammurus*.
4. *Tallimula chloropus*. - One shot on Beaver Creek.

33579. *Sialia arctica* ♀ ad. Crino Station on A. & P. R. R. 183: 338: 113: 74: no. 1, 9.5: gape 21; tars., 22: Mtc., 20.5: cl., 6.5 Nov. 21.
33580. *Ceremophila alpestris* ^{adults identified by Dargatzis} ♂ ad. ^{Chino Valley - Nov. 22} 175: 321: 102: 75: cul., 11.5: no. 1, 8.5: gape, 15: tars., 22: Mtc., 17: cl., 6.5
33584. *Gymnocitta cyanocephala* ♀ ad. Granite Mountain, Nov. 24th. 274: 460: 142: 107: cul., 32: gape, 34.5: tars., 39: mtc., 28: cl., 9.
33585. *Gymnocitta cyanocephala* ♀ ad. Granite Mountain, Nov. 24th. 285: 460: 146: 113: cul., 34: gape, 38: tarsus, 38: mtc., 30: cl., 10.
33586. *Gymnocitta cyanocephala* ♀ ad. Granite Mtn. Nov. 24th. 277: 452: 113: cul., 33: gape, 37: tarsus, 39: mtc., 29: cl., 9.
33575. *Sialia arctica* ♂ ad. Peach Spring Station, Nov. 19. 192: 355: 119: 78: no. 1, 10: gape, 22: tarsus, 24: mtc., 22: cl., 7.
33587. *Sitta carolinensis aculeata* ♂ ad. 5 miles east of Whipple Barracks, Nov. 25th. 150: 265: 91: 55: cul., 20: gape, 24: tarsus, 19: mtc., 21: cl., 6.5.
33586. *Lophophanes inornatus* ad. 5 miles east of Whipple Barracks, A. T. Nov. 25th. 145: 220: 71: 64: cul., 12: no. 1, 10: gape, 14: tars., 20: mtc., 16: cl., 5.5.
33588. *Psaltiriparus plumbeus* ♀ ad. Whipple Barracks, Nov. 25. Sides, pale yellow. Bill, tarsi, feet and claws, black. 117: 156: 51: 60: cul., 7: gape, 9: tarsus, 17: mtc., 12: cl., 4.
33589. *Psaltiriparus plumbeus* ♀ ad. Whipple Barracks, A. T. Nov. 25th. Sides, brown. Other parts colored as the last. 113: 154: 51: 61: cul., 7: gape, 8: tarsus, 17: mtc., 12: cl., 4.
33590. *Psaltiriparus plumbeus* ♀ ad. do do do do. 111: 155: 51: 60: cul., 8: gape, 9: tarsus, 18: mtc., 12: cl., 4.
33598. *Stella neglecta* ♂ ad. Nov. 25th Agua Fria. 260: 420: 130: 93: cul., 35: gape, 37: tarsus, 39: mtc., 38: cl., 19.

33599. *Pipilo fuscus mesoleucus* H. B. ranch. 127: 308: 95: 114: cul., 16: gape, 17: tarsus, 26: mtc., 26: cl., 7.5. Nov. 25th.
33587. *Lanius ludovicianus excubitorides* ♀ ad. Whipple Barracks, A. T. Nov. 25th. 235: 312: 98: 107: cul., 16: gape, 25: tarsus, 28: mtc., 23: cl., 7.5.
33600. *Carpodacus mexicanus* ♀ ad. 7 miles east of Whipple Bks., A. T. Nov. 25th, 1884.
- ~~*Buteo borealis* ♂ ad. 4 miles east of Whipple Barracks, A. T. Nov. 25, 1884.~~
- * 335: 320: 98: 148: cul., 38: no. 1, 32: gape 41: tars., 33: mtc., 29: cl., 8.
33594. *Picus villosus harrisi* ♀ ad. 4 miles east of Whipple Barracks, A. T. Nov. 25th, 1884. 226: 385: 120: 89: cul., 28.5: gape, 29: tars., 19: mtc., 20: cl., 9.
33595. *Pipilo maculatus megalonyx* ♂ ad. Nov. 25th, 1884. 7 miles East of Whipple Barracks, A. T. 216: 285: 89: 108: cul., 15: gape, 15.5: tars., 27: mtc., 26: cl., 8: hind claw, 11.
33591. *Zonotrichia intermedia* ♀ juv. Whipple Barracks, A. T. Nov. 25th, 1884. 168: 239: 76: 78: cul., 11.5: gape 12: tars., 22: mtc., 21: cl., 6.
33592. *Aphelocoma floridana woodhousei* ♀ ad. Nov. 25. 292: 393: 125: 143: cul., 27: gape, 31: tars., 39: mtc., 29: cl., 9. Whipple Bks., A. T.
33601. *Geococcyx californianus* ♂ ad. Copper Canyon, near Fort Verde, A. T. November 26th, 1884. 600: 540: 182: 305: cul., 55: gape, 69: no. 1, 37: tarsus, 64: mtc., 48: cl., 13. Depth of bill over centre of nostril 14.5: width at base of upper mandible 23. Stomach filled with grasshoppers! Excessively fat.
33593. *Buteo borealis calurus* ♀ juv. Canon of the Colorado opposite Peach Spring, A. T. 580: 1300: 420: 265: cul. + cere 35: cere, 16: cul., 23: gape 43: tars., 89: mtc., 69: cl., 24: hind claw 31. Nov. 25th, Prescott, A. T.

Nov. 28th, 1884.

To-day rode forty-three miles to see two children that were blown up with gun powder caps. I rode in the ambulance to Hudson's, on Ash Creek, finished my work, and returned to Fort Verde in the mail buckboard, by way of Cherry Creek, arriving here about seven o'clock in the evening. As I took no gun, no specimens were secured. The following species were seen:

Mammals. - Lepus callotis texianus, Lepus sylvaticus (arizonae?), Mephitis estor Merriam. Wood Rat, and a dead deer (antelope), that has been shot near Cherry Creek settlement. Two Deer were killed, last week, in Copper Canon.

Birds. - 1. Microla migratoria propinqua. - A large flock seen in Copper Canon.

2. Oroscoptes montanus. - Scarce.

3. Geothlypis trichas. - Common all the way, except in the timber.

4. Sialia arctica. - Scarce.

5. Regulus calendula. - Common.

6. Lophophanes inornatus. - A few.

7. Psaltirparus plumbeus.

8. Sitta carolinensis aculeata. - One in Copper Canon and also seen in the pines of Cherry Creek.

9. Salpinctes obsoletus. - A few in the Verde Valley and in Copper Canon & Cherry Creek woods among the rocks.

10. Eremophila alpestris. - Between the Canon and Hudson's.

11. Lanius ludovicianus excubitorides. - Several seen.

12. Carpodacus frontalis. - Common.

13. Amphispiza belli nevadensis. - Scarce.

14. Junco annectens. - Abundant.

15. Spizella breweri. - A number seen in Copper C.

16. Zonotrichia intermedia. - Abundant, and all that I could see distinctly were intermedia.

17. Pipilo maculatus megalonyx. - Abundant.

18. Pipilo fuscus mesoleucus. - Scarce.

19. Scolecophagus cyanocephalus. - At the Post.

(Nov. 28th, 1884.)

20. *Sturnella neglecta*. - Common.
21. *Corvus corax*.
22. *Apelocoma floridana woodhousei*. Very abundant all the way save in the Verde Valley.
23. *Cyanocitta stelleri macrolopha*. - Common in the pine, oak and juniper forest of Cherry Cr.
24. *Melanerpes formicivorus*. - Abundant in Cherry Cr.
25. *Asyndesmus torquatus*. - A large flock was found in the pines at Cherry Creek.
26. *Colaptes mexicanus*. - Abundant.
27. *Accipiter fuscus*.
28. *Junco cinereus deserticola*.
29. *Buteo borealis calurus*. - An adult sat on a rock within a couple of rods of the buckboard & was with difficulty made to fly. Abundant.
30. *Buteo swainsoni*. - One sat directly over the road in the settlement on Cherry Creek and did not fly till we were within 25 feet of the branch. He then flew a couple of rods and lit on a rock.
31. *Lophortyx gambeli*. - A flock was seen near the foot of Copper Canon, scattered over considerable ground, which must have contained upwards of 100.
32. *Geococcyx californianus*. - The buckboard driver saw one 2 miles west of Hudson's rancho on Ash Creek.

Nov. 29th, 1884.

Skinned birds nearly all day. Towards evening took a walk half a mile up Beaver Creek and saw:-

1. *Harporhynchus crissalis*. - Common.
2. *Salpinctes obsoletus*. - At the Post.
3. *Lanius ludovicianus excubitorides*. - One shot near the Post & others seen. One attacked Mrs. Lint. Morgan's Canary-bird in the cage and nearly killed it a few days ago.
4. *Carduelis frontalis*.
5. *Melospiza fasciata*. - Rather common.
6. *Pipilo aberti*. - Abundant.
7. *Zonotrichia intermedia*. - Abundant.

8. *Scolecophagus cyanocephalus*. At the Post.
9. *Corvus corax*.
10. *Sayornis nigricans*. - On Beaver Creek.
11. *Colaptes mexicanus*. - Common.
12. *Buteo borealis calurus*.
13. *Oxyechus vociferus*. - A number seen both in the
14. *Ardea herodias*. - One adult was sitting on the dead top of a tree beside the Verde River.
15. *Gallinago media wilsoni*. - Three flushed along Beaver Creek. As it was getting dark they flew well and a long way, uttering their accustomed cry.
16. *Merops cucullatus*. - One young male shot.
17. *Querquedula cyanoptera*. - One on Beaver Creek.
18. *Lophortyx gambeli*.

Notes:-

1. *Felis concolor*. One was seen a short time since at Copper Canon. The buckboard driver helped to dispatch one in the Agua Fria Canon, 5 miles from the P.O. on the Whipple Road. The dog treed it and they shot it with a pistol and shotgun.
2. *Cardinalis virginianus*. - This species breeds every year five or six miles from the P.O. the Agua Fria.
3. *Speotyto cunicularia*. - A colony of Burrowing Owls live at the above locality. One was brought home while I was away on the last scout with General Crook.

3602* *Lanius ludovicianus excubitorides* ♀ ad.

still showing trace of vermiculated plumage below.
233; 324; 98; 108; Cul., 17; gape, 25; tarsus, 28; intertarsal, 24; Cl., ? Sent to Louis A. Zerega.

3603 *Merops cucullatus* ♂ juv.

465; 655; 189; 182; Cul., 38; gape 51; tars., 34;

Nte., 59; claw 9. Bare part of tibia 8; tip of mandible 9;

Irides brownish yellow; bill purplish black with spot of horn color near tip of each mandible.

tarsi posteriorly and feet inferiorly and web superiorly black - tarsi anteriorly & toes superiorly yellowish gray - claws dusky tipped with horn color.

December 2nd, 1884. Ft. Verde, Ariz.

Took a walk with Mrs. Means and little Lillian along the Verde River. Among the Birds seen were Crissal Thrashers, Abert's Towhees and Say's Vireos, Green-winged Teal and Song Sparrows, *Zonotrichia intermedia*, and Gambel's Quails, and Wilson's Snipes, Kingfishers and Killdeer.

Lophortyx gambeli. ♀ a bird of the year.

Shot by E. A. Means. Not measured.

Canis latrans, Say. - We were walking up towards the bend of the River to get a shot at some ducks, when I saw a coyote running along the margin of the Verde on the Beaver Bank, towards where we were standing. I ran swiftly to the cover nearest the River, and prepared to shoot it as it passed; but, when it saw me, it took to the water without the slightest hesitation, although the water was swift and deep. It swam swiftly and, emerging on the opposite side of the River, gave a rapid shake and sent the spray flying from its tail by a swift stroke, and dashed up the steep bank. I fired, but the distance was too great for the No. 4 shot. The Wolf shied to one side and gave a little yelp and then departed swiftly on an errand.

December 3rd, 1884. Ft. Verde, A. T.

3604 *Harporhynchus crissalis*. ♀ ad.
303; 317; 95; 143; cul., 39; not., 31; gape, 41;
tarsus, 34; mte., 31; cl., 9.

3605 *Picus scalaris*. ♀ ad.
185; 340; 105; 72; cul., 20; gape, 23; tarsus, 18.5;
mte., 20; cl., 6.

Mexican Bluebirds seen.

Dec. 4th, 1884. Ft. Verde, Ariz.

This afternoon I walked a couple of miles from the Verde and thence over to Beaver Creek, and followed the creek down to the Verde near the Post.

Buteo borealis. - An adult in perfect plumage sat in a cottonwood tree beside the Verde. It allowed me to get almost within range, then flew, and I missed it; but it only flew a short distance and alighted on an other cottonwood, but flew away to an other tree across the Verde where I could not follow it.

Gallinago media wilsoni. - Two or three were found on Beaver Creek. They had little cover to hide them and were excessively shy, flying away before I could get within good range, and circling very high in the air performing wild gyrations as they descended at a distance and alighted again upon the margin of the stream. With much trouble I shot two nice specimens, making good wing shots each time.

Sayornis nigricans. - On Beaver Creek.

Sayornis sayi. - A few scattered individuals seen.

Dendroica auduboni. - Common. Feeding with the

Anthus ludovicianus. - A flock of perhaps twenty was found among the aquatic plants and green grass bordering little side branches of the Verde. The birds scattered when feeding, and when the flock divided up into a number of little bands, and scattered over the neighboring suitable place and began feeding. They have much the appearance of *Siuri* on the ground, tilting their bodies continually, and on wing utter a plaintive cry. The Audubon's Warblers were feeding with them & I shot both species at the same discharge.

Harporhynchus crissalis. - Common.

Capito aberti. - Common.

Junco annectans. On Beaver Creek. One flock.

Zonotrichia intermedia. - Common.

(Dec. 4, 1884 - Continued.)

Corvus corax. - A few.*Accipiter cooperi*. - One on the land, was pursued by a small bird, probably *Sayornis sayi*.*Regulus calendula*. - A few.*Carpodacus frontalis*. - Common.*Melospiza fasciata*. - On the stream.*Oxyechus vociferus*. - A few.*Ceryle alcyon*. - Two seen on Beaver Creek.*Sporophila gambeli*. - Abundant.3606. *Ardea herodias*. - The only one seen was on Beaver Creek.3606. *Tallinago media wilsoni* ♂ ad.
290; 450; 140; 70; cul., 69; gape, 68; bare tibia, 14; tarsi, 32; mte., 39; cl., 7.5; bill, olive-brown (darker laterally) for basal 3/5, becoming black for basal two-fifths. Legs & feet plumbeous, with a greenish cast. Claws, black.

It fell into the water and swam to shore and tried to hide. When I essayed to catch it it took to the water and swam so well that I had some trouble to catch it. It did not dive. Fat.

3607. *Tallinago media wilsoni* ♂ ad.
274; 430; 133; 64; cul., 65; gape, 64; bare part of tibia, 14; tarsi, 32; mte., 36; cl., 6.5. Same as above. Lean.3608. *Oxyechus vociferus* ♀ ad.
270; 512; 168; 125 (to no. caudal filament); cul., 23; gape, 23; tibia (bare part), 19; tarsi, 35; mte., 25; cl., 4.3609. *Ceryle alcyon*. ♂.
321; 550; 160; 97; cul., 50; gape, 67; tarsus, 12; bare tibia, 9; mte., 24; cl., 8.5.3610. *Anthus ludovicianus* ♂ ad.
168; 270; 87; 73; nost., 9.5; gape, 17; tarsus, 23; mte., 20; claw 5; hind claw 10. Iris hazel. Bill with maxilla brownish black. Mandible yellowish at base, shading into brownish black at tip. Tarsi & feet dark brown. Claws blackish.

(Dec. 4, 1884 - Concluded.)

3611. *Anthus ludovicianus* ♂ ad.
165; 273; 87; 72; nost., 9; gape, 16.5; tars., 23; mte., 19; claw, 5; hind claw, 9. Colors same as above.3612. *Anthus ludovicianus* ♂ ad.
170; 276; 87; 70; nost., 9.5; gape 17.5; tars., 22; mte., 19; claw, 5; hind claw, 10. Colors as above.3613. *Anthus ludovicianus* ♂ ad.
170; 279; 87; 71; nost., 9; gape 17; tars., 22.5; mte., 20; claw, 5; hind claw, 9. Colors same as above.3614. *Anthus ludovicianus* ♀ ad.
164; 268; 84; 68; nost., 9; gape, 17; tars., 22.5; mte., 18.5; claw 4.5; hind claw, 9. Colors as above.3615. *Anthus ludovicianus*. ♂ ad.
170; 277; 92; 74; nost., 9; gape, 17; tars., 22.5; mte., 20.5; claw 5.5; hind claw, 11.3616. *Dendroica auduboni*. ♂.
146; 235; 75; 61; nost., 7; gape, 13; tars., 20; mte., 17; claw 4.5.December 6th 1884.

Spent the day in hunting. Rode to Davidson's ranch above Rosvick, and, after hunting through the fields, skirted the Verde for a mile, and returned through Brown's place. Many birds were seen which I failed to identify, as the dead weeds, sunflowers and bushes made good cover and I was particularly engaged in shooting "cotton-tails" and Gambel's Quail of which we got a large number. I noted the following species.

Harporhynchus crissalis, *Sialia mexicana*, *Regulus calendula*, *Anorthura troglodytes* (pacificus?). - Mr. Vogdes saw one in some brush beside the Verde. *Salpinctes obsoletus*. - Abundant. One seen on our piazza, several were hopping fearlessly upon the ground under the mules in the L. M. corral at the Fort, and others were seen in arroyos near the Verde. They are comparatively silent at this season.

Anthus ludovicianus. - A few small flocks.
Melospiza fasciata. - Abundant near water.
Zonotrichia intermedia. - Abundant.

Junco sp. - ? - Common. Probably *J. aikeni*.
Spizella socialis arizonae? - A few flocks of
 what I thought to be this species were seen.
Carpodacus frontalis. Common in flocks.
Chrysomitris pinus. - A few Pine Finches were
 seen eating seeds of sunflowers.

Pipilo aberti. - In flocks in weeds near the River.
Passerculus. - Abundant
 in the fields at the ranches. One shot.

Sceloporus cyanocephalus, *Sturnella neglecta*,
Corvus corax, *Sayornis sayi*, *Picus scalaris*,
Colaptes auratus mexicanus, *Buteo borealis calurus*
 Very common. *Accipiter cooperi*, *Accipiter*
fuscus. - Several seen hunting Quails. One seen
 eating a Gambel's Quail. *Trinunculus sparverius*.

Falco columbarius. - While shooting Quails, a Pigeon
 Hawk was seen to dart into the sunflower dry
 stalks, and a pitiless squealing cry was instantly
 heard. The Hawk had much difficulty in mastering
 its quarry, a female Gambel's Quail, for it would
 essay to fly and it would dash it to the ground, the
 Quail crying loudly, but fighting and struggling
 desperately to escape. At length the Hawk succeeded
 and I shot him as he sat on his victim's body; but
 he escaped wounded into some underbrush.

Lophortyx gambeli. - Hundreds seen

3617. *Trinunculus sparverius*. ♂ ad.
 270; 585; 192; 146; cul. + cere, 14; cere, 4; cul., 12;
 gape, 16.5; tarsus, 39; mte., 33; cl., 10.5

3618. *Passerculus sandwichensis claudius*. ♂ ad.
 151; 229; 74; 62; cul., 11; gape, 12; tars., 22; mte.,
 21; cl., 5.5; hind claw, 9. Iris brown, hazel.

3619. *Lepus sylvaticus arizonae*. ♂ ad. Skull only.

Catalogue of Specimens collected on the
 Trip from Fort Verde, A.T., to the Aravaipa
 Indian Village on Cataract Creek, A.T., and
 thence skirting the bluffs of the Colorado
 River to Peach Springs, thence to Verde
 way of Big Chino and Williamson's Valleys
 to Whipple Barracks, and thence to Fort Verde, A.T.

3478. *Psaltiriparus plumbeus*. ♂ ad. 4.50 x 6.00
 Prescott, A.T. Nov. 5th, 1884. Left with Dr. Bishop
 at Ash Fork.

3479. *Picus villosus harrisi*. ♂ ad. 9.70 x 16.25.
 Whipple Barracks, A.T. Nov. 5th.

3480 *Accipiter fuscus*. ♂ ad. Nov. 6th 1884.
 Ash Fork. A.T. Left with Dr. Bishop.
 11.80 : 22.70 : 7.05 : 6.00 : cul. + cere, 70; cere 35;
 cul., 40; gape, 62; tars., 2.10; mte., 1.60; claw 40.
 In blue plumage - irides yellow, cere greenish,
 bill plumbeous at base - becoming black towards
 tip - tarsi & feet yellow; claws black.

3481 *Junco hyemalis*. ♂ ad. Nov. 7th 1884.
 Near Stone's Lake. A.T. No measurements in flesh.

3482 *Chrysomitris pinus*. ♂ ad. Nov. 7th 1884.
 First tank of ^{trailing} Ash Fork.
 5.10 x 9.15;

3483 *Anthus ludovicianus*. ♂ ad. Nov. 7, 1884.
 Stone's Lake.
 6.70 x 10.85.

✓ 3484 *Sialia arctica* ♂ ad. Nov. 7, 1884,
Stone's Lake. 7.40 x 13.50.

✓ 3485. *Sialia arctica*. ♂ ad. Nov. 7-1884-Stone's Lake.
7.55 x 13.90.

✓ 3486. *Sialia arctica* ♀ ad. Nov. 7, 1884. 22 miles north of Stone's Lake.
7.25 x 13.25.

3487. *Circus hudsonius*. ♂ juv. Nov. ^{8th} 1884, Stone's Lake
18.15 x 41.50. Iris hazel.

3488. *Circus hudsonius*. ♂ ad. Nov. 8th 1884, Stone's Lake
18.50 x 43. Irides yellow.

3489. *Circus hudsonius*. ♂ ad. Nov. 8th 1884, Stone's Lake
18.75 x 42. Irides yellow.

✓ 3490. *Myiadestes townsendi* ♂ ad. Nov. 9-1884. Black Tanks
8.90 x 14.25.

✓ 3491 *Crenophila alpestris* ^{arenicola (fide Dwight)}
♂ ad. Near Cataract Creek Cañon - Nov. 9-1884
6.85 x 12.00

3492. *Opaltriparus plumbeus* ♂ ad. Nov. 9-1884. Bluffs border
ing Cataract Creek Cañon. Shot just before entering Cañon.

✓ 3493. *Lophortyx gambeli*. ♂ ad. Nov. 10-1884. 25 miles
from Supai Indian village in cañon of
Cataract Creek. 10.80 x 14.50.

✓ 3494. *Lophortyx gambeli* ♂ ad. Nov. 11th 1884. in Indian
village Cataract Creek 11.20 x 15.00.

✓ 3495. *Melospiza fasciata montana*. ♂ ad. Nov. 10-1884. Shot
in the Cañon, 20 miles from Supai Indian village in
Cataract Creek Cañon. 6.80 x 9.25.

✓ 3496. *Catherpes mexicanus conspersus*. ♂ ad. Nov. 10, 1884.
Shot 20 miles from Supai Indian Village.
5.75 x 7.55.

3497. *Parus montanus* ♂ ad. Nov. 11, 1884. Supai Indian
Village. 5.70 x 8.75.

3498. *Regulus calendula*. ♂ ad. Nov. 11, 1884. Supai
Indian Village. 4.50 x 7.15.

✓ 3499. *Telmatorhynchus palustris paludicola* ♂ ad. Nov. 11-84.
Supai Indian Village. 5.50 x 7.15.

✓ 3500. *Picus harrisi* ♀ ad. Nov. 11, 1884. Supai Indian
Village. 8.75 x 15.00.

✓ 3501. *Lophortyx gambeli* ♂ ad. Nov. 12th 1884. Supai Indian
Village. 11.40 x 15.00. Destroyed by rats.

✓ 3501. *Spinunculus sparverius*. ♂ ad. Nov. 11, 1884. Supai
Indian Village. 10.40 x 23.00. Destroyed by rats.
stomach filled with grasshoppers. Shot on a tree.

- ✓ 3502. Lophortyx gambeli ♂ ad. Nov. 12. 1884. Supai Indian Village. 11.20 x 14.95. Crops filled with corn-peach kernels and beans - cultivated. Destroyed by rats.
- ✓ 3504. Agelaius phoeniceus. ♂ ad. Nov. 12. 1884. Supai Indian Village. 9.75 x 16.25.

✓ 3505. Amphispiza belli nevadensis. ♀ ad. Hualapai trail - Cataract creek - Nov. 12. 1884. 6.80 x 10.30.

✓ 3506. Salpinctes obsoletus ♂ ad. Hualapai trail - Cataract Creek. 6.05 x 9.00. Destroyed by rats.

3507. Junco l. shufeldti ♂ (juv.?) Head of Hualapai trail. ^{Supai Cañon.} Nov. 12. 1884. 6.30 x 9.80.

✓ 3508. Mniotilta townsendi. ♂ ad. Nov. 12. 1884. At the head of the Hualapai trail into Supai Cañon. Just the night we came out while waiting for pack train. 9.10 x 14.65.

✓ 3509. Sialia mexicana. ♀ ad. Nov. 15. 1884. Pine Springs. 7.00 x 12.80. Not poisoned.

✓ 3510. Aphelocoma woodhousei ♀ ad. Nov. 15. Pine Springs. 11.75 x 15.70. Not poisoned.

3511. Chrysomitris pinus. ♂ ad. Pine Springs - Nov. 15. 1884. 5.30 x 9.25. Not poisoned.

3512. Chrysomitris pinus. ♂ ad. Pine Springs. Nov. 15. 1884. 5.15 x 8.50. Not poisoned.

3513. Chrysomitris pinus. ♂ ad. Nov. 15. 1884. Pine Springs. 5.10 x 8.90. Not poisoned.

3514. Chrysomitris pinus. ♀ ad. Nov. 15. 1884. Pine Springs. 5.00 x 9.00. Not poisoned.

3515. Asyndesmus torquatus. ♀ ad. Nov. 15. 1884. Pine Springs, A.T. 11.45 x 21.50. Not poisoned.

3516. Carpodacus cassinii. ♂ ad. Nov. 15. 1884. Pine Springs, A.T. 6.75 x 11.75. Not poisoned.

✓ 3517. Sialia mexicana. ♂ ad. Nov. 15. 1884. Pine Springs A.T. 7.12 x 13.50. Not poisoned.

3518. Merula migratoria propinqua. ♂ ad. Nov. 15. 1884. Pine Springs, A.T. 10.20 x 16.25. Not poisoned. Destroyed by rats.

3519. Merula migratoria propinqua. ♀ ad. Nov. 15. 1884. Pine Springs, A.T. 10.85 x 16.80. Not poisoned. Destroyed by rats.

3520. Carpodacus cassinii. ♀ ad. Nov. 15. 1884. Pine Springs, A.T. 6.85 x 11.60. Destroyed by rats.

3521. Asyndesmus torquatus. ♂ ad. Nov. 15. 1884. Pine Springs, A.T. Not poisoned. 11.55 x 22.10.

3522. Asyndesmus torquatus. ♀ ad. Nov. 15. 1884. Pine Springs, A.T. 11.25 x 21.00. Destroyed by rats.

✓ 3523. Spizella monticola. ♂ ad. Nov. 16. 1884. Grand Cañon of the Colorado opposite Pine Springs. 8.75 x 11.20.

✓3524. *Thryomanes bewicki leucogaster*. ad.
5.50 X — ? Grand Cañon at Pine Springs

3525. *Buteo borealis calurus*. ♂ ad. Nov. 17, 1884.
Grand Cañon of the Colorado at Pine Springs.

✓3526. *Sphyrapicus williamsoni thyroideus*, ♂ ad.
Nov. 17, 1884. Grand Cañon of the Colorado
near Pine Springs, A.T. 9.38 X 16.50.

✓3527. *Loxia curvirostra mexicana*. ♀ ad. Nov. 17,
1884. Pine Springs, A.T. 6.80 X 11.90.

✓3528. *Loxia curvirostra mexicana*. ♂ ad. Nov. 17, 1884.
Pine Springs, A.T. 7.20 X 12.35

✓3529. *Loxia curvirostra mexicana*. ♀ ad. Nov. 17, 1884.
Pine Springs, A.T. Shot by Capt. Roberts. 6.90 X 11.95.

✓3530. *Loxia curvirostra mexicana*. ♀ ad. Nov. 17, 1884.
Pine Springs, A.T. Shot by Capt. Roberts. 6.88 X 11.70.

✓3531. *Loxia curvirostra mexicana*. ♂ ad. Nov. 17, 1884.
Pine Springs, A.T. Shot by Capt. Roberts. 7.10 X 12.25
(12.25)

✓3532. *Loxia curvirostra mexicana*. ♂ ad. Nov. 17, 1884.
Pine Springs, A.T. Shot by Capt. Roberts. 7.03 X 12.50.

✓3533. *Loxia curvirostra mexicana*. ♂ ad. Nov. 17, 1884.
Pine Springs, A.T. Shot by Genl. Crook. 7.25 X 11.95
Destroyed by rats.

✓3534. *Loxia curvirostra mexicana*. ♀ ad. Nov. 17,
1884. Pine Springs, A.T. Shot by Genl. Crook. 6.97 X 11.70.
Destroyed by rats.

3535. *Carpodacus cassinii*. ♀ ad. Nov. 17, 1884. Pine
Springs, A.T. Shot by Genl. Crook. 6.95 X 11.60.
Destroyed by rats.

3536. *Asyndesmus torquatus*. ♀ ad. Nov. 17, 1884.
Pine Springs, A.T. 11.35 X 21.00.
Destroyed by rats.

3537. *Carpodacus cassinii*. ♀ ad. Nov. 17, 1884.
Pine Springs, A.T. 6.85 X 11.45. Shot by Genl. Crook.
Destroyed by rats.

✓3538. *Loxia curvirostra mexicana*. ♂ ad. Nov. 17, 1884.
Pine Springs, A.T. 7.25 X 12.35. Shot by Genl. Crook.

✓3539. *Loxia curvirostra mexicana*. ♂ ad. Nov. 17, 1884.
Pine Springs, A.T. 7.25 X 12.30. Shot by Genl. Crook.

✓3540. *Loxia curvirostra mexicana*. ♂ ad. Nov. 17, 1884.
Pine Springs, A.T. 7.45 X 12.60. Shot by Genl. Crook.
This is a remarkably fine, bright specimen. It
gives the colors of its changeable parts. Those of
the others collected scarcely differ from it. Bill,
dusky-olive, horn-color along edges of mandibles
and at base below. Tarsi and feet, olivaceous brown.
Claws, brownish-black. Stomachs of all filled with
seeds of pine, and a few ^{small} green buds.

3541. *Carpodacus cassinii*. ♂ ad. Nov. 17, 1884. Pine
Springs, A.T. 6.70 X 11.50. Shot by Genl. Crook.

3542. *Chrysomitris pinus*. ♀ ad. Nov. 17, 1884. Pine
Springs, A.T. 5.12 X 8.95. Shot by Genl. Crook.
Destroyed by rats.

- 3543 *Asyndesmus torquatus* ♂ ad. Nov. 17, 1884. Pine Springs, A. T. Shot by Genl. Crook. Not poisoned. 11.60 X 21.60.
- 3544 *Carpodacus cassinii*. ♀ ad. Nov. 17, 1884. Pine Springs. Shot by Genl. Crook. Not poisoned. 6.65 X 11.10. Destroyed by rats.
- 3545 *Carpodacus cassinii*. ♀ ad. Nov. 17, 1884. Pine Springs, A. T. Shot by Genl. Crook. Not poisoned 6.60 X 11.25.
- 3546 *Asyndesmus torquatus*. ♂ juv. Nov. 17, 1884. Pine Springs, A. T. Shot by Genl. Crook. Not poisoned. 11.00 X 21.40.
- ~~3547 *Asyndesmus torquatus*. ♂ ad. Nov. 17, 1884. Pine Springs, A. T. Shot by Genl. Crook. Not poisoned. 11.55 X 22.10. Destroyed by rats.~~
- 3547 *Chrysomitris pinus*. ♀ ad. Nov. 17, 1884. Pine Springs, A. T. 5.23 X 8.85. Destroyed by rats.
- ~~3548 *Asyndesmus torquatus*. ♀ ad. Nov. 17, 1884. Pine Springs, A. T.~~
- 3548 *Picus villosus harrisi*. ♂ ad. Nov. 17, 1884. Pine Springs, A. T. 9.65 X 16.50. Not poisoned.
- 3549 *Asyndesmus torquatus*. ♂ ad. Nov. 17, 1884. Pine Springs, A. T. 11.35 X 21.00. Shot by Genl. Crook. Not poisoned.
- 3550 *Chrysomitris pinus*. ♀ ad. Nov. 17, 1884. Pine Springs, A. T. 5.05 X 8.85. Shot by Genl. Crook. Destroyed by rats.
- 3551 *Chrysomitris pinus*. ♀ ad. Nov. 17, 1884. Pine Springs, Arizona. 5.08 X 9.00. Shot by Genl. Crook. Not poisoned.

- 3552 *Loxia curvirostra mexicana*. ♂ ad. Nov. 17, 1884. Pine Springs, Arizona. 7.13 X 12.40. Shot by General Crook. Not poisoned.
- 3553 *Loxia curvirostra mexicana* ♂ ad. Nov. 17, 1884. Pine Springs, Arizona. 6.95 X 12.10. Shot by Genl. Crook. Not poisoned.
- 3554 *Carpodacus cassinii*. ♂ ad. Nov. 17, 1884. Pine Springs, A. T. 6.60 X 11.30. Destroyed by rats.
- 3555 *Melanerpes formicivorus*. ♀ ad. Nov. 17, 1884. Pine Springs, A. T. 9.75 X 18.40. Not poisoned. 150; 95; cul. 26.5; tars. 24; ule., 26.
- 3556 *Cyanocitta stelleri macrolopha* ♀ ad. Nov. 17, 1884. Pine Springs, A. T. 12.50 X 18.10. Presented to Capt. Robert.
- 3557 *Asyndesmus torquatus*. ♂ ad. Nov. 17, 1884. Pine Springs, A. T. Shot by General George Crook. 11.25 X 21.10. Not poisoned.
- 3558 *Asyndesmus torquatus*. ♀ ad. Nov. 17, 1884. Pine Springs, A. T. Shot by General Crook. 11.30 X 21.50. Not poisoned.
- 3559 *Asyndesmus torquatus*. ♀ ad. Nov. 17, 1884. Pine Springs, A. T. Shot by General Crook. 11.45 X 21.90. Not poisoned.
- 3560 *Asyndesmus torquatus*. ♂ juv. Nov. 17, 1884. Pine Springs, A. T. Shot by General George Crook. 11.30 X 21.35. Not poisoned.

35-61 *Asyndesmus torquatus* ♂ juv. Nov. 7, 1884.
Pine Springs, Arizona. Shot by General Crook.
11.75 X 21.60. Not poisoned.

35-68 *Toxia curvirostra mexicana* ♀ ad. Nov. 17, 1884.
Pine Springs, Arizona. Shot by General Crook.
7.00 X 11.95.

35-69 *Toxia curvirostra mexicana* ♀ ad. Nov. 18, 1884.
Pine Springs, Arizona. Shot by Dr. Means.
6.70 X 12.00.

35-70 *Parus montanus* ♀ ad. Nov. 18, 1884. Between
Pine Springs and Peach Springs, A.T. 5.40 X 8.45.

~~35-71~~ *Sitta carolinensis aculeata* (♀?) ad. Nov. 19, 1884
15 m. n.e. of Peach Springs, A.T. 6.05 X 11.40.
Although the parts were in bad condition for a
careful examination I thought I found the
ovary instead of testicles, although the specimen
has an intensely black crown - not plumbeous
as in typical *carolinensis*.

35-73 *Sialia arctica* ♀ ad. Nov. 19, 1884. Peach Springs
7.00 X 13.00. Destroyed by rats.

35-74 *Sialia arctica* ♂ ad. Nov. 19, 1884. Peach Springs
7.45 X 14.15. Destroyed by rats.

35-76 *Sialia arctica* ♂ ad. Nov. 19, 1884. Peach Springs
7.35 X 14.00. Destroyed by rats.

35-77 *Sialia arctica* ♂ ad. Nov. 19, 1884. Peach
Springs, Arizona. 7.20 X 13.25.
Destroyed by rats.

35-80 *Eremophila alpestris* ♂ ad. Sept. 23, 1884.
35-81 *Amphispiza belli nevadensis* ♂ ad. Nov. 22,
1884. Big Chino Valley, Arizona. 6.30 X 9.85.

35-78 *Sialia arctica* ♂ ad. See page 233.

35-79 *Sialia arctica* ♀ ad. See page 234.

35-82 *Lanius ludovicianus excubitorides* ♂ ad.
Nov. 23, 1884. Williamson's Valley. 9.20 X 12.85.
It came and alighted on a fence-post beside me
uttering a harsh, snipe-like cry, as I sat skin-
ning birds. It had a grasshopper in its beak
when I shot it.

Plant Record

Globular purple flowers ("Eufillere")	1885
Alnus	Feb. 1 st
Salix	Feb. 18 th
Manzanita	Feb. 18 th
Low cranesbill (in the Post)	Mar. 1 st
White fragrant legume	" 2 nd
Cottonwood	" 3 rd
Indian Pink (<i>Castilleja gloriosa</i>)	" 3 rd
Blue legume (at Aztec 4-story dwelling)	" 5 th
Corydalis	" 10 th
Black ash	" 17 th
Esernia	" 17 th
The Gaetaceae in the vicinity of Fort Verde,	" 18 th
Arizona are as follows:	

1. *Mammillaria (Coryphantha)* ?
Soace. Flowers end of July.
2. *Cereus (Echinocereus) phormiceus*. April
3. *Opuntia (Platyspuntiia) Rafinesquii fusiformis*.
4. *Opuntia (Cylindropuntia) Whipplei*.
5. *Opuntia (Cylindropuntia) frutescens longispina*.
6. *Mammillaria*
Alnus in full flower
Globular purple flowers
Low Cranesbill in the Post

1886
Feb. 2nd
Jan. 24.
Feb. 1st.

Note on Fishes: -

On Jan 11th, 1885 I netted a large number of fishes. The largest specimen was about six inches in length and others were not more than an inch long. They were all caught along the margin of the Rio Verde opposite to the Post of Fort Verde. All of the larger ones were Catostomidae, and the smaller ones were minnows and the young of the fish called "Gila Trout" and "Bony-tail", at least I think they are the fry of that species. They are preserved in four bottles. The largest bottle contains the largest specimens. They are Catostomus cyphus of Lockington (Jordan and Gilbert, p. 129). Among them are a few specimens of paler coloration, larger scaled and with about twelve instead of fifteen dorsal rays.

An other bottle contains about fifty minnows and a few dark spotted, ten to small-eyed fishes resembling Rhinichthys atronasus. The two small bottles contain mixed specimens of the several species and forms above mentioned.

There are notes on Fishes in this Journal on pages ⁸⁶123, 182, 184, 199, 256, 286, 287, 393, 414 and 418. In Journal of San Carlos trip, Fishes are noted on pp. 23, 29.

December 10th, 1884.

- ✓3620. *Zonædura carolinensis* ♀ ad.
292: 447: 145: 138: cul., 12.5: gape 20:
tars., 21: mte., 26: claw 7.
3621. *Chamaepelia passerina* (L.) Sw. ♂ ad.
Ground Dove. Iris - a narrow circle yellow
orange red - bill reddish at base
shading through dusky brown to the
blackish tip. Tarsi and feet flesh
color - claws brownish. Under surface
of wing bright reddish brown, except
the proximal quills which are
brownish slate color - barely edged with
the bright ^{second} ^{stage} ^{color} - primaries and
distal quills tipped with the same.
168: 280: 87: 63: cul., 11: gape 15:
base of bill to occiput, 23: tars., 16:
mte., 20: claw 5. Crop filled with small,
rough seeds.
- ✓3622. *Sayornis sayi* ♂ ad. In perfect winter dress.
192: 328: 100: 88: nost., 11: gape, 22: tars., 21:
mte., 18: cl., 6. Iris, hazel. Bill, black with a
brownish tinge at base of mandible; tarsi, feet
and claws, black. Lining of wings, ^{very} pale rufous.
Under side of quill-feathers pale at base (about
like greater wing coverts, growing darker terminally).
- ✓3623. *Picus scalaris* ♀ ad. 187: 325: 99: 71:
cul., 21.5: gape, 25: tars., 19: mte., 21: cl., 8.

In addition to the above specimens collected,
the following species were noted: -

Harporhynchus crissalis. - Occasionally utters a
few notes of its song.

Regulus calendula. - Abundant; but none sing.

Anthus pratensis ludoviciana. - On the margin
of the Verde.

Dendroica auduboni. - Alights with *Anthus*
beside the water, spending much time on
the ground, but of course does not wade like

the Titlark

Lanius ludovicianus excubitorides. - Common.

Carpodacus frontalis. - Common. One flock
which contained several hundreds was
seen feeding in the weeds and upon the
ground in a patch of dry caper stalks
perhaps upon their seeds. Not heard singing.

Melospiza fasciata. - Common.

Zonotrichia intermedia. - A few flocks.

Pipilo aberti. - In flocks or families. Rather
shy and disposed to hide. Makes a
whirring sound when flying. Rather silent.
Its startling call-note is seldom heard,
and subdued when uttered; but in its
place a low "tut-t" like *Zonotrichia*
albicollis in the East.

Colaptes cyanocephalus. - At the Post.

Sturnella neglecta. - Abundant. One note
very similar to a Blackbird's or Hermit
Thrushes. In large flocks.

Corvus corax. - Scarce.

Sayornis sayi. - Rather common.

Ceryle alcyon. - Only one seen on the Verde.

Picus scalaris. - Common.

Picus villosus. - One or two were seen. I
have not noted the species here before.

Colaptes auratus mexicanus. - Common.

Buteo borealis calurus. - Common.

Buteo borealis. - One seen? It had very
broad wings and appeared large, but I
did not get a near view. If any other
species than this it was. *Urubitinga anthracina*.

Junco oreganus. - Several.

Accipiter cooperi.

Haliaeetus leucocephalus. - A fine adult
set on a tree across the Verde River,
which had risen on account of the
two days' rain. The rain-gauge measured
2 inches rainfall. I waded across it.

River, however, but did not get a shot. This is the first one I have seen in Arizona. It was common a few years ago on the Verde, and nested opposite the Post, on a large Cottonwood. By crossing the River I also got a specimen of Chamaepelia passerina. - This piping Pigeon arose at my feet with a flock of Carolina Dove and Gambel's Quail. The buzzing noise of its wings and the bright rufous coloring attracted my attention and I shot it as soon as it alighted on a branch 20 feet from the ground. It is the only one I ever saw!

Zenaidura carolina. - Abundant in large flocks and very fat.

Lophortyx gambeli. - One that I wing-tipped in an open spot gave me a hard run, but I caught & brought it home alive. It was rather tame and ran with wonderful swiftness from one room to another. I noted that it never separated the feathers of its crest. While carrying it, it remained perfectly quiet in the pocket of my shooting coat except when it heard other Quails calling when it struggled to get out & join them.

Oxyechus vociferus. - Upwards of a dozen were seen, but less abundant than earlier in the season apparently.

Fringoides macularius. - One pair seen near the mouth of Beaver Creek on the Verde bank.

Ardea herodias. - A number seen. The ground was wet and they were seen a good way from the Verde looking for food upon the ground.

Anas boschas. - One flock.

Fuligula ~~affinis~~ marila. - One or two flocks.

Querquedula carolinensis. - A few flocks

December 11th, 1884.

Still showery in the Verde Valley and heavy snow on the hills around.

Salpinctes obsoletus. - One went under the piazza flooring through an open board and stayed a good while. Very gentle & silent.

Notes. - In "The Century Illustrated Monthly Magazine," for December, 1884, is the best account of the Rocky Mountain Goat-exterminator. The author is an Englishman and spent a summer in hunting them and learned their habits. He shot a number personally.

In "Popular Science Monthly", vol. xxvi, p. 267, December, 1884, is an article entitled: "More about The Beaver", by Samuel Aughey of Lincoln, Nebraska, which is worth referring to. There was an article in the May No. entitled "The Beaver and his Works", which sees also.

December 15th, 1884 Fort Verde, Ariz. Went out for a couple of hours along the Verde shore and saw a flock of Mallards (Anas boschas) and shot a Buff-breasted Merganser (Mergus merganser). A single Spotted Sandpiper (Fringoides macularius) was shot, which had a few spots on the sides behind; and I also shot a Killdeer (Oxyechus vociferus). Quails, Doves, Cerebral Thrashers, Juncos and a species of Spizella which may be montana were seen, and plenty of meadow Larks, Savanna Sparrows & Great Blue Herons and a Kingfisher were among the other species noted. I saw one Jack and one Cotton-tail Rabbit, but their tracks were not frequent in the snow. They have kept close.

December 15th, 1884.

3624. *Oxyechus vociferus*. ♂ ad.
263:532:166:104: cul., 21.5: gape 23:
fore part of tibia, 21: tars., 38: Mte., 29: claw, 6.

3625. *Tringoides macularius*. ♀ ad. Quite fat.
193:340:108:58: cul., 23.5: gape 25.5:
fore part of tibia, 11: tars., 23: Mte., 24: claw, 4.
Iris hazel, bill with maxilla brown at base
becoming blackish at tip, mandible flesh
color tipped with blackish, tarsi + feet
flesh color, claws flesh color at base residue blackish.

3626. *Accipiter fuscus*. ♀ ad.
338:660:205:175: cere + cul., 20: cere, 9: cul., 12:
tars., 56: Mte., 44: claw, 11. Claw of hallux, 16.
Iris reddish orange, - cere greenish yellow, bill,
with base of mandible + maxilla laterally,
blue, residue plumbeous black - tarsi +
feet lemon yellow - claws black. Stomach empty.

3627. *Passerculus savanna alaudinus* ♂ ad.
144:240:72:60: cul., 10: gape, 11: tars., 21:
Mte., 19: claw 5.
Iris hazel - bill with maxilla brownish black
mandible flesh color - tarsi + feet flesh
color, claws pale brownish.

3628 *Mergus merganser* ♂ juv.
660:920:275:123: cul., 54: bill from nostril, 34:
gape 73: fore part of tibia, 10: tars., 55: Mte., 80:
claw, 9. Iris orange yellow, bill vermillion
with maxilla purplish red - dusky in the
median line - whitish or horn color toward tip
of both mandibles - mandible vermillion
tarsi + feet reddish orange - toes dusky beneath.
This specimen is moulting and the ventral surface
is curiously mixed with the adult and juvenile coloring.
The fore part of breast, flanks, inside of legs, crissum,
and under tail-coverts are rich buff as is also a
narrow streak down the center of the breast, which
cuts in two the large patch of pure white which
covers all of the central lower surface. A few
of the dark feathers of the head are appearing in the

the white chin-patch.

December 16th, 1884.

Lieut. Vogdes went shooting and brought home
a pair, male and female, of adult Red-head Ducks
(*Erythra americana*) and a young drake of the
American Widgeon (*Mareca ~~fulva~~ americana*).

December 17th, 1884.

Spent nearly the whole day in hunting with
Lieut. Vogdes. He killed two male Ring-billed
Blackheads (*Fulix collaris*), from a large flock,
but his dog in retrieving them bit the skin all
up so that they could not be preserved. These are
the first I have seen. The following-named
Birds were seen.

Harporhynchus crissalis. - Common. They like
to hunt for food beside the Verde upon the
bare sand. A few notes of its song were heard,
just enough to remind one that it could sing.
The weather has been intensely cold. The
thermometer has registered 7° above zero and
perhaps lower. The snow is several feet deep
in the hills around us, and has been several
inches deep here for a week, scarcely wasting at
all during the daytime. The still places in the
Verde River are all frozen.

Sialia mexicana. One flock only.

Regulus calendula. - Common in the sagebrush
and cottonwoods.

Thryothorus bewicki leucogaster. - Two were seen
and one shot in the brush. One was in the top
of the tall cottonwoods when seen. It tilts its
tail up and climbs about like a Titmouse, which
its habits resemble.

Salpinctes obsoletus. They stay in our back yard
continually. Are partial to the wood pile but
come on the porch and window sill and
are so tame that you can almost touch them.

Dec. 17.



They seldom ~~or~~ tilt their tails up; but when closely approached they throw their head backward till the bill points nearly straight upward, with the head drawn close to the body.

Sitta carolinensis aculeata. - One was shot in a cottonwood. It is the only one I have seen in the Verde bottom, although the species is common in the Cherry Creek forest, and I have seen a few in Copper Canon in the pinyons.

Eremophila alpestris. - Large flocks have come down into the Valley since the heavy snow fell upon higher ground.

Anthus ludovicianus. - Scattered along the margin of the Verde in some abundance.

Dendroica auduboni. - Several seen.

Dendroica

This is the first one I have found in Arizona.

It was pecking at a bunch of dry leaves in a cottonwood tree. I thought it was a Green-backed Goldfinch (*Astragalinus psaltria*) until I picked up the dead bird.

Lanius ludovicianus excubitorides. Common.

Its singular cry was often heard.

Carpodacus frontalis. - Abundant.

Passerculus savanna. - A few along the margin of the Verde.

Coereba grammacus confinis. One shot.

Zonotrichia intermedia. - Scarce.

Spizella monticola ??). A few sparrows were shot at near the Post which had a note like the Tree Sparrow, but they were shy & not positively identified.

Junco sp. - ?? Juncos are rather common but none of those seen were specifically identified.

Pipilo aberti. - In families. Make a whurring sound when they fly.

Corvus corax carolinensis. A few seen.

Sceloporus orcutti. In cottonwoods beside the River.

Dec. 17

Actinella neglecta. Common. They stay close to the water and often wade in with the Littlearks and Killdeers.

Sayornis sayi. - Several seen.

Picus scalaris. Common.

Picus villosus. - One.

Colaptes auratus mexicanus. - Common in the cottonwoods beside the Verde. One male that I shot had red feathers in the nape.

Junco phoeniceus. Scarce.

Accipiter cooperi

Accipiter fuscus.

Buteo borealis calurus. Abundant in various conditions of plumage one appeared to be perfectly black with red tail and another was pure white below with pale back and pale rufous tail.

Zenaidura macroura. Abundant; they seem to have suffered much from the bitter cold and snow. They sit on the ground or lie rather with feathers ruffed up and allow you to walk close up to them before taking to flight. Many of them were thus reduced, and so lean as not to be fit to eat when shot.

Lophortyx gambeli does not seem to mind the cold weather in the least. I saw dozens of large flocks.

Oxyechus vociferus was rather common.

Ardea herodias. - Several seen.

Bernicla canadensis. One flock of seven was put up twice but none shot. Mr. Vogel saw them yesterday at the same place.

Anas boschas. One large flock.

Nelion carolinensis. One flock.

Fulix marila. Common.

Fulix collaris. One flock.

Mergus merganser. Common.

Fulica americana. Two seen. One frozen in ice.

Dec. 17th*Ceryle alcyon*. Several were seen on the Verde.3629. *Dendroica palmarum* *lutescens*.

♂ Bill shot off; allowance for it made in measurement of length, 129; 198; 62; 54; most, —; gape, —; tarsus, 18; mte., 15; cl., 5. Iris, hazel. Bill dusky brownish at base, the rest shot away. Tarsi feet & claws, dusky plumbeous. Fat and in excellent condition.

✓3630. *Colaptes auratus mexicanus*. ♂ ad.

340: 545: 163: 132: cul., 43; gape, 48; tars., 32; mte., 34; claw, 13. Bill plumbeous black - iris dark red - tarsi, feet & claws plumbeous.

✓3631. *Colaptes auratus mexicanus* ♂ ad. This specimen has a strongly indicated red nuchal patch and black spotting in white of rump. 336: 545: 167: 122: cul., 42; gape 44: tars., 32: mte., 34: claw, 12. Colors of parts same as above.

✓3632. *Tinnunculus sparverius*. ♂ ad.

273: 575: 190: 140; culmen + cere, 15; cere, 4; adn., 12; gape, 18; tarsus, 38; mte., 31; cl., 9.5.

3633. *Fulica americana* ♀ ad. Found frozen to death beside Verde River.

370: 646: 177: 58: cul., from feathers, 41; gape, 32; bare part of tibia, 20; tars., 55; mte., 79; claw, 12. Iris orange red, bill white banded with red near the end - the frontal plate dark brownish red, tibia with an orange red band - tarsus bright green shading thence to plumbeous towards the extremity of the toes - claws plumbeous black - joints dusky. Found frozen to death.

✓3634. *Lophortyx gambelli* ♀ ad.

275: 360: 110: 101: cul., 48; gape 13. tars., 32; mte., 35; claw 8.5.

✓3635. *Harporhynchus crissalis*. ♂ ad.

315: 330: 100: 145: cul., 39; most, 31.5; gape, 43; tars., 33; mte., 31; claw 9. Bill black - iris pale straw color, tarsi feet & claws plumbeous brown.

✓3636. *Sitta carolinensis aculeata* ♂ ad.

160: 292: 95: 55: cul., 21.5; gape, 25; tars., 19; mte., 22; claw 6.

3637. *Proccetes gramineus confinis*. ♀ ad.

153: 263: 80: 66: cul., 11; gape, 13; tars., 21; mte., 20; claw, 6.

✓3638. *Carpodacus frontalis*. ♂ juv. adult.

148: 248: 78: 63: cul., 10; gape 11; tars., 17; mte., 19; claw, 6.

✓3639. *Carpodacus frontalis* ♂ ad.

158: 258: 80: 67: cul., 11; gape 12; tars., 18; mte., 20; claw, 5.

December 19th, 1884. Ft. Verde, A.T.3640. *Chondestes grammacus*. ♂ ad.

184; 290; 91; 82; cul., 14; gape, 14; tarsus, 21; mte., 20; cl., 5.

3641. *Regulus calendula* ♂ ad.

111; 181; 60; 47; most, 6; gape, 11.5; tars., 20; mte., 14; cl., 4.

3642. *Proccetes gramineus confinis*. ♂ ad.

162; 270: 83: 72: cul., 11; gape 12; tars., 23; mte., 20; claw 6.

3643. *Proccetes gramineus confinis*. ♀ ad.

160: 265: 82: 70: cul., 12; gape 13; tars., 21; mte. 20; claw 5.

3644. *Meleagris gallopavo* ♀ ad.

length to end of toes, 1020; end of tail, 1010; stretch, 1370: 430: 350: cul., 38; most, 25; gape, 54; tars., 130; mte., 93; claw, 18.5. Iris, hazel. Bare skin of head, red. Base of bill, dusky purplish; residue, horn-color. Tarsi, purplish brown; feet, blackish; claws, horn-color.

✓3645. *Thryothorus bewicki leucogaster* ♀ ad.

135; 173; 51; 58; cul., 14; most, 9.5; gape, 17.5; tarsus, 18; mte., 16; cl., 4.5.

Calamospiza bicolor
Chondestes grammacus } Both abundant

December 21st 1884.

3646. *Cardinalis virginianus igneus*. Cape Cardinal.
♂ ad. Shot on the Agua Fria, near the Post Office.
243; 310; 103; 123; cul., 20.5; gape 19.5;
width of bill at gape, 14; height of bill at base, 17;
tars., 26; mte., 24; claw 7; hallux, 9; its
claw, 8.5. Iris hazel, bill bright red, with
maxilla faintly tipped with dusky - tarsi
feet + claw dark brown.
3647. *Melanerpes formicivorus*. ♀ ad.
233; 440; 145; 95; cul., 24.5; gape, 27.5;
tars., 20; mte., 24; claw, 8.5. Cherry Creek.

December 22nd 1884. Ft. Verde.

3648. *Sialia mexicana*. ♂ ad. 176; 325; 107; 72.
nostr., 9; gape, 19; tarsus, 21; mte., 21; claw, 6.
3649. *Sialia mexicana*. ♀ ad. 171; 315; 105; 68;
nostr., 9; gape, 19; tarsus, 21; mte., 21; cl., 6.
3650. *Oxyechus vociferus* ♂ ad. Beaver Creek
260; 500; 139; 106 (filamentous prolongation
making 8 mm of its length). cul., 20; gape, 21;
tars., 36; mte., 26; cl., 5; bare tibia 16.
Length to end of tars., 255.
3651. *Oxyechus vociferus* ♂ ad. Beaver Creek.
262; 508; 165; 105; cul., 21; gape, 23;
tarsus, 35; mte., 24; cl., 5; bare tibia, 19.
Length to end of claws, 257.
3652. *Sceloporphagus cyanocephalus* ♀ ad.
242; 380; 122; 108; cul., 20; gape, 22.5;
tarsus, 32; mte., 27; cl., 7.5.
3653. *Pipilo aberti* ♀ ad.
238; 291; 90; 117; cul., 15; gape, 15.5;
tarsus, 29; mte., 28; cl., 9.
3654. *Sayornis sayi* ♂ ad.
200; 325; 110; 87; nostr., 11; gape, 23
tars., 20; mte., 18.5; cl., 6. This bird was
uttering a loud sweet twitter, with little
effort at a regular song at intervals. It is
truly a singing bird & its efforts are quite successful.

December 24th 1884.

3655. *Lophortyx gambeli*. ♀ ad.
285; 368; 113; 107; cul., 11; nostr., 8.5; gape, 13;
tars., 32; mte., 35; claw, 9.

December 25th 1884.

3656. * *Sayornis sayi* ♂ ad. Shot by Mrs. E. A. Means.
100; 342; 111; 92; nostr., 12; gape, 24; Tars., 25;
mte., 19; claw, 5.5. Iris hazel, bill, tarsi,
feet + claws, black.
3657. * *Regulus calendula* ♂ ad. Shot by - Mrs. E. A. Means.
113; 181; 61; 48; nostr., 6; gape, 12; tars., 19;
mte., 13.5; claw, 4.5.
3658. * *Thryomanes bewicki leucogaster* ♂ ad. Shot by Mrs. E. A. Means.
137; 182; 58; 63; cul., 15; nostr., 9.5;
gape, 18; tars., 18; mte., 16; claw, 4.5.
3659. * *Pipilo aberti*. ♂ ad. Shot by Mrs. E. A. Means.
233; 289; 92; 117; cul., 16; gape, 16;
tars., 29; mte., 27.5; claw, 9.5.
3660. * *Lophortyx gambeli* ♀ ad. Shot by Mrs. E. A. Means.
272; 372; 116; 110; cul., 11; nostr., 8; gape, 12;
tars., 32; mte., 35.5; claw 10.
- Note. - Although it is generally conceded by
persons living in Arizona that the "Mexican
Lion" (*Felis concolor*) is a cowardly and
timid animal, still there are some stories
told of its having attacked man, one of which
was told me to-day, as follows: A man who is
now living in the valley of the Rio Verde a few
miles from here, whose name is Kelly, was walk-
ing through a corn-field when a "Lion" sprang
upon him. He defended himself with his knife
and drove the beast off, but with much trouble.
I hope to interview Mr. Kelly personally on the subject.

December 27th, 1884.

No. 155. *Lepus sylvaticus arizonae*. Desert Hawk. ♂ ad.
Total length, 420. Head and body 353. Tip of nose
to end of outstretched hind leg, 565; eye, 40; ear, 65
measures; tip of ear, 163; occiput, 77.
Tail to end of vertebrae, 44; hairs 67. Length of
manus, 151; pes, 102. Length of fore
leg, 118; hind leg, 185. Height of ear
from crown, 88; greatest breadth, 48.
Fore-arm 70 (to elbow) 90. Ears, broadly
edged with black & black tipped for 9 mm.
Chest girth 100.

No. 156. *Lepus sylvaticus arizonae*. Desert Hawk. ♂ ad.
Total length, 390. Head and body, 327. Tip of nose
to end of outstretched hind leg, 525; eye, 39; ear 64
tip of ear, 164; occiput, 73. Tail to end of
vertebrae, 39; hairs 63. Length of manus, 146
pes, 90; length of fore leg, 108; hind leg, 170.
Height of ear from crown, 84; breadth, 50.
Fore-arm to elbow, 67; leg, 100.
Chest girth 185.

No. 157. *Lepus sylvaticus arizonae* ♂ ad. Desert Hawk.
Total length, 385. Head and body, 327. Tip of
nose to end of outstretched hind leg, 520; eye, 38.
ear, 62; occiput, 76; tip of ear, 150.
Tail to end of vertebrae, 44; hairs, 68.
Length of manus, 45; pes, 93. Height of
ears above crown, 85; width, 51.
Length of fore leg, 106; hind leg, 180.
Chest girth, 190.

13661. *Geococcyx californianus*. ♂ ad.
590: 550: 188: ~~330~~ 310: cul., 56; nostr., 38:
gape, 68; width of bill at gape, 26; depth of
bill over nostr., 14; tars., 62; mte., 45;
claw, 12.5.

13662. *Amphispiza belli nevadensis*. ♂ ad.
166: 253: 81: 80: cul., 11; gape 12; tars., 22:
mte., 25; claw 5.

13663. *Amphispiza belli nevadensis*. ♂ ad.
165: 252: 80: 80: cul., 11; gape 12; tars., 22:
mte., 18; claw, 4.5.

13664. *Amphispiza belli nevadensis*. ♂ ad.
165: 255: 82: 80: cul., 11; gape 12; tars., 22:
mte., 19; claw, 5.

Today I rode to Clear Creek to see
a patient with a broken clavicle. I shot two
cotton-tails (*Lepus arizonae*) right after
crossing the Verde and hung them up in a
mesquite bush until I returned when I
got off my horse to get them and found
Rabbits so abundant that I had shot
six more before returning to my horse with
the other two. I also shot some Quail,
and the true specimens of *Amphispiza*
belli nevadensis, a species which has
become quite abundant about Verde,
inhabiting the same situations that the
Amphispiza bilineata does in summer.

December 30th, 1884.

Spent the greater part of the day in hunt-
ing Beaver Creek up to the cliff dwellings.
Fiber zibethicus. - One Muskrat seen.

Lepus callotis texianus.
Lepus sylvaticus arizonae } Abundant.

Birds: -

1. *Phylloscopa arizonae auduboni*. - One
was shot, but could not be sexed.

2. *Harporhynchus cristatus*. - Abundant.

3. *Sialia mexicana*. Abundant. Feeding on insects.

4. *Regulus calendula*. Abundant. Not singing.

5. *Salpinctes obsoletus*.

6. *Anthus ludovicianus*.

7. *Eremophila alpestris*.

8. *Dendroica auduboni*. - Abundant. It has
the habits of a flycatcher and associates with
Sayornis sayi, beside the water.

9. Carpodacus frontalis. Abundant.
10. Astragalinus cristatus. Quite a number were seen along Beaver Creek feeding in small flocks upon the seeds of sycamores (Platanus occidentalis), uttering its sweet call note ("twee") and chattering notes exactly the same as in the East. These are the first I have seen in Arizona.
11. Passerculus sandwichensis alaudinus.
12. Pooecetes gramineus confinis.
13. Chondestes grammia. About the East.
14. Zonotrichia gambeli intermedia. - This is the only Zonotrichia that I have seen here lately. They are very abundant. Probably a few leucophrys are mixed with them; but all that I have observed carefully were intermedia.
15. Junco annectens. - This Junco is abundant, but without doubt some of those seen are of other species than this. I have been too busy to collect specimens and determine just what species we have here now.
16. Amphispiza belli nevadensis. - Common in certain localities. Its note and general appearance are similar to the Junco.
17. Melospiza fasciata. - Abundant
18. Pipilo aberti. - Abundant.
19. Calamospiza bicolor. - In small flocks.
20. Agelaius phoeniceus. - A few females are with Bonaparte Blackbirds about the corals, but no males.
21. Scelopophagus cyanocephalus. The large flocks frequenting the corals in the daytime all retire themselves to the brush and little patches of rushes along the streams at night.
22. Corvus corax carolinensis. - Very scarce.
23. Sturnella neglecta. Common.
24. Sayornis sayi. Abundant.
25. Ceryle alcyon. Common on Beaver Creek and the Verde River.

26. Picus scalaris. - Abundant.
27. Colaptes auratus mexicanus. Abundant in small flocks.
28. Buteo virginianus subarcticus. - An old male in gray plumage, without much if any trace of rufous was shot in a sycamore-tree near Beaver Creek. It fell in the stream but swam swiftly to shore using its wings vigorously, and climbed onto some brush on the bank. When I tried to catch him, he hopped up on the lower boughs of some trees and sooner than be captured it sprang boldly into the stream and swam ashore on the opposite bank, where it hopped along so swiftly that it would soon have escaped had I not shot it again, to prevent its hiding in the bushes before I could cross the stream.
29. Buteo borealis calurus. Abundant.
30. Circus hudsonius. - Common.
31. Spizella socialis. One male seen.
32. Zenaidura macroura.
33. Lophortyx gambeli. One flock ascended a vertical wall of limestone for an hundred feet, flying straight up from one ledge to the next.
34. Oxyechus vociferus.
35. Tringoides macularius. One on the Verde.
36. Ardea herodias. One on Beaver Cr.
37. Megascops asio. One on Beaver Cr.
38. Merula carolinensis. One old male shot.
39. Bucephala clangula. Golden Eye. I saw one on Beaver Creek and met a man with two more that he had shot there.
40. Aythya americana. Met a man who had four which he shot on Beaver Creek to-day.
41. Anas boschas. Several Mallards seen.
42. Fulix marila. One flock.
43. Bernicla canadensis.

13665. *Astragalinus tristis*. ♂ ad.

133: 239: 77: 57: cul., 10.5: gape 11.5:
tars., 14: Mtc., 17: claw 5.

13666. *Astragalinus tristis*. ♂ ad.

130: 238: 78: 56: cul., 11: gape, 12:
tars., 14: Mtc., 16: claw, 5.

Iris hazel - bill dusky olive brown - yellowish
along and at base of mandible - tarsi
feet + claws, brownish flesh color.

3667. *Nettion carolinensis*. ♂ ad.

398: 605: 183: 85: cul., 39: from nostril,
29: gape 43: height of bill at base, 16:
width at gape, 14: bare tibia, 10: tarsus, 29: mtc., 40
cl., 7. Bill black, with the "nail" on lower mandible
purplish-brown. Tarsi, bare tibiae + toes gray.
webs and claws, blackish, the latter shading to
horn-color laterally.

13668. *Colaptes auratus mexicanus*. ♂ ad.

335: 535: 165: 122: cul., 42: gape, 46
tarsus, 32: mtc., 36: cl. 12.

Naked on nape.

13669. *Bubo virginianus subarcticus*. ♀ ad.

525: 1330: 400: 235: cul. + cere, 38:
cere, 19: cul., 25: gape, 41: tars., 57:
Mtc., 72: 1st claw (hallux) 26: 2nd cl., (inner) 25:
3rd, 30: 4th, 31. Irides yellow, bill +
claws plumbeous black - bare extremity
of toes, greenish. Gizzard filled with bones of rodents

158. *Lepus sylvaticus arizonae*. ♂ ad.

Total length, 390. Head and body, 315. From tip of
nose to end of outstretched hind-leg, 515: eye, 36:
ear, 67: tip of ear, 160: occiput, 76.
Tail from root to end of vertebrae, 50: hairs, 75
Ears, height above crown, 93: width 51
Length of manus, 45: of pes, 94
Length of fore leg, 110: of hind leg, 180
Between eyes 34. Chest girth

No. 159. *Caracus* ^{crookii} ~~leucurus~~. White-tailed Deer. ♂ juv.
From tip of nose to eye, ^{5.87} 150: ear, ^{9.48} 240:
occiput, ^{17.73} 280: tip of ear, ^{4.50} 450:
lacrimum from inner canthus to lacrimal
opening, ^{1.50} 13: lacrimal opening, ^{1.50} 13.
^{Height of ear from root} 146. Ear from crown, ^{7.50} 190: tip of nose to
base of horns, ^{8.87} 225: ears, breadth ^{16.56} 110:
girth of head behind horns, ^{3.94} 420: distance
between eyes, ^{6.31} 100: length of horn in a
straight line, ^{1.92} 160: forks nearly equal + about
in length about 35: circumference of
horn above base, ^{1.80} 46: Tail to end vertebrae
^{8.27} 210: end of hairs ^{10.45} 275. Bare space of glans
on hind leg (only) is narrow, ^{1.50} 13 mm long
and hard to find in the bushy hair growing
in that part. Shot near the base of Bill Williams
Mountain by C. H. Allabach, Dec. 5th, 1884.

January 1st 1885.

3670. *Nettion carolinensis*. ♀ ad. Weight 10 oz.

360: 590: 177: 78: cul., 35: from nostril, 28:
gape 43: height of bill at base 13: width at gape,
13: bare tibia, 9: tars., 30: Mtc., 42: cl., 7.

13671. *Bubo virginianus subarcticus*. ♀ ad.

520: 1255: 355: 215: cul. + cere, 42:
cere, 19: cul., 27: gape, 46: tars., 54:
Mtc., 70: cl., 29: claw of hallux, 24: inner claw,
31: outer claw, 25. Colors same as No. 3669
preceding. Gizzard filled with bones and
hair of small rodents, mostly rats (*Neotoma*,
albigula).

January 3rd 1885. Ft. Verde, A.T.

No. 160. *Lepus sylvaticus arizonae*. ♂ ad.

Total length 400. Head and body, 330. Tip of nose to end of
outstretched hind-leg, 535: eye, 36: ear, 65: tip of
ear, 148: occiput, 72. Tail to end vert., 45: hairs,
70: Ears, height above skull, 82: greatest breadth
47: Length of manus, 47: of pes, 95: length
of fore leg, 108: of hind leg, 178: Between eyes
33: Chest girth, 187.

1. "Camelion." *Sceloporus*

Total length, 240. Nose to anus., 131; Anus to end of tail 109; Nose to eye, 14; ear, 27

January 3rd Continued

✓36723. *Astragalinus tristis*. ♀ ad.
127: 225: 74: 53: cul., 10: gape, 11.5:
tars., 15: mte., 16: claw, 5.

✓36734. *Astragalinus tristis*. ♀ ad.
133: 230: 75: 56: cul., 11: gape 12:
tars., 14: mte., 15.5: claw, 4.5.

✓36743. *Astragalinus tristis*. ♀ ad.
136: 230: 75: 54: cul., 11.5: gape, 12:
tars., 14: mte., 17: claw, 6.

✓36751. *Astragalinus tristis*. ♀ ad.
135: 232: 76: 57: cul., 11: gape, 12:
tars., 13.5: mte., 16: claw, 5.5.

✓36767. *Astragalinus tristis*. ♀ ad.
136: 230: 76: 58: cul., 11: gape, 12: tars., 13:
mte., 15: claw, 5.

Colors of all --- Bill yellowish at base especially below - shading into dusky olive brown - with maxilla blackish towards tip - iris hazel - tarsi, feet & claws fleshy brown.

✓3677. *Salpinctes obsoletus*. ♂ ad.
149: 233: 75: 55: cul., 19: nost., 13:
gape, 14: tars., 21: mte., 17: claw, 4.

✓3678. *Lanius ludovicianus excubitorides*. ad.
235: 330: 103: 112: cul., 18: gape, 25:
tarsus, 28: mte, 24: cl., 7.

✓3679. *Colaptes auratus mexicanus* ♂ ad. no red on nape
333: 540: 167: 124: cul., 39: gape 42:
tars., 33: mte., 35: claw 11.5.

✓3680. *Sayornis sayi*. ♀ ad.
203: 346: 112: 92: nost., 12: gape, 23: tars., 22:
mte., 17: claw 5:

✓3681. *Myiadestes townsendi* ♂ ad.
224: 353: 120: 109: ~~108~~, nost., 7: gape, 18:
tars., 21: mte., 22: claw, 6.

✓3682. *Calamospiza bicolor* ♂ ad.
178: 287: 90: 74: cul., 14: gape 15:
tars., 24: mte., 22: claw, 5.

✓3683. *Calamospiza bicolor*. ♀ ad.
176: 278: (85): 72: cul., 13: gape, 13:
tars., 24: mte., 21: claw, 5.

3684. *Anas boschas* ♀ ad. Weight 2 lbs 1 1/2 oz.
540: 890: 268: 100: cul., 53: nost., 39: occiput
from front of feathers, 58: bill, breadth below nostril, 21:
gape, 63: bare tibia, 13: tars., 43: mte., 61:
claw, 8. Iris hazel, terminal area of bill
~~with~~ yellow with the nail black - irregularly
marked with yellow at base and around
nostril - the ^{large} central ^{area} ~~portion~~ blackish -
mandible ~~tipped~~ yellow & slightly spotted
& tipped with black - tarsi & feet orange
yellow, webs dusky, claws blackish.

✓3685. *Bubo virginianus subarcticus* ♀ ad.
520: 1325: ~~930~~ (390): 210: cul. + cere, 40:
cere, 18: ^{cul.} ~~cere~~ 28: gape, 44: tars., 58: mte., 68:
cl., 28: hallux-claw, 21: inner cl., 29:
outer cl., 24. Stomach contained only hair & bones of small rodents.

✓3686. *Bubo virginianus subarcticus*. ♂ ad. Jan. 4th.
495: 1240: 360: 210: cul. + cere, 36:
cul., (24): cere, 15: gape 42: tars., 55:
mte., 60: claw, 25: claw of hallux, 22:
inner claw, 27: outer cl., 23, Ft. Verde, A. T.

✓3687. *Bubo virginianus subarcticus*. ♀ ad. Jan. 4th.
This specimen and No. 3686 were a mated pair
and were both shot at one shot as they
sat side by side in a cottonwood.
533: 1335: 388: 230: cul + cere, 31:
cere, 18: cul., 30: gape 46: tars., 58:
mte., 70: claw, 29: claw of hallux, 25:
inner claw, 31: outer cl., 26. Stomachs empty.

January 6th, 1885

To-day a couple of hunters came in with two buros packed with deer.

Two bucks weighed, 94 and 106 lbs.

Two does weighed 59 and 64 lbs.

All were dressed, with the head cut off.

A buck was weighed at the store a few weeks ago which weighed with head on 188 lbs., eviscerated. Its neck was swollen and its flesh strong, but tender & juicy. We used a little of it but soon tired of it on account of the rank strong flavor indicating that the buck was rutting.

No. 161. *Cervus macrotis*. ♂ ad. Weight 106 lbs, dressed with head cut off. Tail & caudal vertebrae only, preserved. Length to end of hairs, 330; vertebrae 190.

*3688. *Zonotrichia gambeli intermedia*. ♂ ad. 1182: 262: 83: 84: cul., 11.5: gape, 12.5: tars., 23.5: mte., 22.5: claw, 6.

*3689 *Zonotrichia gambeli intermedia*. ♀ juv. 1166: 243: 77: 74: cul., 11: gape, 12: tars., 21.5: mte., 21: claw, 5.5.

3690. *Mareca americana* ♂ ad. 520: 825: 265: 120: cul., 38: from nostril, 27: breadth of bill below nostrils, 15: gape 44: bare tibia, 14: tars., 41: mte., 52: claw 8.

3691. *Regulus calendula* ♂ ad.

112: 179: 60: 48: nost., 6: gape 13: tars., 21: mte., 14: claw, 4.

January 8th, 1885.

No. 162. *Cervus macrotis*, Say. White Deer ♂ ad. The four legs and hoofs preserved. A doe weighing, when dressed with head off 64 lbs. The gland on hind leg 127 mm in length.

No. 163. *Lepus callotis texianus*. ♀ ad.

From tip of nose to end of outstretched hind-leg, 810; to eye, 60; ear, 92; tip of ear, 285; occiput, 118. Length of head and body, 497. Tail from root to end of vertebrae, 95; hairs, 143. Ear, height above crown, 169; greatest breadth, 80. Length of manus, 71; pes, 148. Length of fore-leg, 196; hind leg, 250. Between eyes, 44. Chest girth, 290. Longest whiskers, 115. Longest fore claws, 13. Longest hind claws, 14. Total length, 640.

No. 164. *Lepus sylvaticus arizonae*. ♂ ad. Shot by Mrs. Mearns.

From tip of nose to end of outstretched hind-leg, 510; to eye, 44; ear, 63; tip of ear, 163. Tail from root to end of vertebrae, 53; of hairs, 75. Length of head and body, 330. Total length, 406. Ears, height above skull, 86; greatest breadth, 49. Length of manus, 48; pes, 93. Length of fore-leg, 111; of hind leg, 172. Between eyes, 32. Chest girth, 200. Longest whiskers, 87. Longest fore-claws, 8. Longest hind-claws, 9.

3691.
3741
(See p. 320)

**Lanius ludovicianus excubitorides* ♀ ad. Shot by Mrs. E. A. Mearns. Irides, dark hazel. Bill, black. Plumbeous on basal two-thirds of lower mandible. Tarsi, feet and claws, black. 235: 323: 101: 107: cul., 16: nost., 12: gape, 25: tarsus, 29: mte., 24: cl., 7.5.

3692. *Lophortyx gambeli*. ♂ ad. 290: 375: 115: 113: cul., 11: nost., 8: gape, 13: tars., 34: mte., 39: cl., 10.

January 9th, 1885.

3693. *Lophortyx gambeli*. ♂ ad. Found dead! 287: 375: 115: 108: cul., 11: gape, 12.5: nost., 8. Tarsus 33; mte., 38; cl., 10. Iris, hazel. Bill, black. Tarsi & toes plumbeous. Maxilla & scutellae edged with brown; claws, blackish. Had been shot clear through in several places with No. 8 shot.

Canis macrotis, Say. Mule Deer. —

Some days ago a woodchopper asked me to come up to his camp in a cañon in the foothills just north of Copper Cañon and shoot a large buck. I said I would go the next day; but professional engagements prevented, and I postponed the hunt till this afternoon. An Indian guide brought me to the cañon and there I met a hunter packing out two large bucks which he had shot, together with two does yesterday afternoon. My woodchopper had gone with him, and they corralled a herd of Mule Deer in a cañon and got no less than fifteen shots, killing four before they could escape.

The hunter said that two bucks had been seen in a little cañon to the left. I spent the afternoon in hunting for them but saw no signs even when I got above snow level; but birds were abundant and the following named species were noticed.

Oreoscoptes montanus. — Singing

Sialia mexicana.

Myiadestes townsendi. — Quite numerous in the pinons. They have a loud, startling whistle and were singing exquisitely.

Lophophanes inornatus. Abundant.

Salpinctes obsoletus.

Aphelocoma woodhousei. — Abundant.

Zonotrichia gambeli intermedia.

Pipilo fuscus mesoleucus. Several seen.

Pipilo maculatus megalonyx. A few.

Lophortyx gambeli. In large flocks.

Geococcyx californianus. One at base of foothills.

Mammals: — I saw one Tela chipmunk (Tamias striatus dorsalis) which chattered loudly. I could easily have secured the specimen if I had taken a shotgun. It is the first I have seen here. There were Pine-tailed Squirrels (Sciurus harrisi) and a few Sciurus arizonae.

Jan. 10th, 1885

3694. Buteo borealis calurus ♀ ad. Mrs. Mearns picked it up dead near the bank of the Verde River, it having been shot with rifle bullet through foot of ~~leg~~ tibia, at junction with tarsus. It was extremely emaciated but had died very recently. Stomach empty. 580: 1400: 435: 245: cul., + cere, 38: cere, 15: cul., 28: gape, 47: tars., 98: mtc., 70: claw, 26.

3695. Harporhynchus crissalis. ♀ ad. Shot by Mrs. E. A. Mearns. Iris, raw number. Bill black, feet + claws black, tarsi brownish black, — 310: 330: 102: 145: cul., 36: nost., 30: gape, 42: tars., 34: mtc., 30: cl., 7.

3696. Lophortyx gambeli. ♂ ad. 275: 363: 111: 106: cul., 11: nost., 8: gape, 13: tars., length of plume, 40: plume of 6 feathers; tars., 32: mtc., 37: claw, 9. Iris dark hazel, bill jet black-tarsi + toes brownish gray-claws blackish.

3697. Zonotrichia gambeli intermedia ♂ ad. 175: 255: 82: 80: cul., 10.5: gape, 12: tars., 24: mtc., 23: claw 6. Iris hazel, bill brownish yellow very slightly tipped with black on both mandibles. Tarsi pale brown-feet dark brown-claw blackish.

Note. — Lophophanes wollweberi. Bridled Titmouse. On Jan 1st I saw and heard what I thought was a Mountain Chickadee (Parus montanus). It flew away before I could see it distinctly. Two days later (Jan. 3rd, 1885) I saw it again in the same place, on Bear Creek near the 3-storied cliff dwelling. I saw it distinctly and it was of this species — the first I ever saw. I was unable to get a fair shot at it except when too close, and so it escaped.

January 11th, 1885.

3698. *Anas boschas*. ♂ ad. Weight 2 lbs. 8 oz. + 1/2 dr.
 645: 1010: 294: 112: cul., 61: nost., 46: gape 71:
 breadth of bill below nostril, 24: height at
 base, 23: bare tibia, 14: tars., 48: Mtc., 72:
 cl., 12: Iris hazel, bill greenish yellow,
 shading to dusky olive near tip of maxilla
 nail on maxilla, black - mandible yellowish
 mottled with black, nail at tip blackish.
 Legs + feet bright orange including webs.
 Claws, corn color at base - shading to
 black at tips.

3699 *Anas boschas*. ♀ ad. Weight 2 lbs., Avoin.
 552: 915: 265: 112: cul., 54: nost., 41:
 gape, 64: breadth of bill below nostril, 22:
 height of bill at base, 23: bare tibia, 13:
 tars., 46: Mtc., 65: cl., 10.

3700 *Sphyrapicus thyroideus* ♀ ad.
 240: 425: 140: 100: cul., 26.5: gape, 28.5:
 tars., 21: Mtc., 23: cl., 9. Bill blue
 black - iris hazel; tarsi + toes plumbeous
 claws plumbeous black. Shot in an isolated
 piñon tree. Oak Creek. January 14th, 1885.

3701 *Hylocichla unalaschkae audubonii*. ♂ ad.
 Oak Creek, A.T. Jan. 15th, 1885.
 183: 285: 93: 75: cul., 9: gape, 19: tars., 31:
 Mtc., 23: cl., 6. Iris hazel, bill brownish
 black with basal half of mandible yellow;
 tarsi brown - feet + claws dusky brown

January 22nd, 1885.

3730* *Melospiza fasciata* (Shot by Mrs. E.A.M.) ♀ ad.
 Verde River, A.T. 155: 289: 67: 66: cul., 12.5: gape, 13:
 tars., 21.5: Mtc., 20: cl., 5: Breadth of bill at base, 6: Height, 6.

3731. *Mergus (Lophodytes) cucullatus*. ♂ ad.
 Beaver Creek, A.T. 465: 647: 188: 104: cul., 39:
 nost., 27: height of bill at base, 12: width at base, 12:
 gape, 49: bare tibia, 8: tars., 31: Mtc., 55: claw 6.5.
 Iris bright orange, bill blackish indistinctly with obsolete with reddish
 nothing below, tarsi grayish brown, toes yellowish brown - claws blackish - claws brownish.

Notes on a Hunting Trip From Fort
 Verde to Indian Garden on Oak Creek.
 Arizona Territory, Between January 14th
 and 18th, inclusive, 1885.

The party consisted, besides myself, of
 1st Lieut. F. de L. Carrington, and two ^{private} Fox and
 Smith, of "E" Co., 1st Infantry, U. S. A.

We left Fort Verde at sunrise, January 14th,
 and marched to Thompson's Rancho on Oak
 Creek, in the Red Rock Country, 25 miles.

For the first five or six miles the trail lay
 across a sandy region of mesquite-covered
 plain and low hills bare of trees, between
 Beaver Creek and the Rio Verde. We then
 crossed a series of cedar-clad ridges in
 which Deer are often seen, and thence
 descended to a wide, grassy prairie bordered
 by low foothills with cedars upon their slopes.
 There we found plenty of Antelope tracks, but
 saw none until, on cautiously peering over
 the first ridge after leaving the prairie, I saw
 a herd of them feeding among some cedar
 oaks & bushes about 200 yards distant. I was
 riding ahead with only a shotgun, and, the
 country being open did not try to stalk them,
 but waited for the buckboard to come up, with
 the rifles. I motioned to the driver to stop, and
 immediately three rifles were brought to the top
 of the hill, but not until the wary animals had
 sniffed the breeze and belated themselves to their
 woods. Smith could not be restrained from
 letting fly at them at 300 yards, as they
 trooped off in single file. Otherwise we might
 have stalked them as the country ahead was
 hilly and afforded cover. I gave Fox my
 horse, and took a seat in the buckboard,
 directing him to take his time, and look for the
 Antelope behind the high ridge over which they

had disappeared, after winding in zigzag to avoid some buttes and cañons, after pausing to look at our party from some eminence. There were fourteen in the band, and they were the only Antelopes seen on the trip.

We then crossed some level, and hilly country, over which a large number of horses and cattle were ranging, and came to the piñon-covered hillsides bordering Beaver Head, a respectable-sized stream of clear, running water, bordered with fine sycamores, alders and box-alders, besides a beautiful species of conifer, which both Mr. Mead and myself failed to identify even ^(*Juniperus arizonensis*) generally. The foliage ~~etc~~ closely resembles that of *Juniperus*. It is glaucous, especially beneath, the branchlets terete, and the bark deciduous, shed in strips like the sycamore (*Platanus occidentalis*), and leaving the trunk smooth and glossy, of a reddish color like manzanita. The cones have from six to eight scales, and contain winged seeds. They are about an inch in length, ovoid in shape, green with a glaucous bloom becoming brownish-red when mature, and adhering in large blackish clusters to the branches after the seeds have been shed. The tree is restricted to ravines and cañons, frequently growing near small streams, upon damp hillsides. It became more abundant as we entered the Red Rock Country, through which it extends as far as Indian Garden, beyond which we did not go. Along Oak Creek it covers considerable areas, in some places to the exclusion of other trees. The young trees form dense brakes in some places, which are impenetrable except along the arroyos and water-courses. The largest

tree seen was about six feet in circumference and sixty feet high. I also saw large groves of these trees on the hillsides along Pine and Fossil creeks 20 to 30 miles east of Fort Verde.

Leaving Beaver Head we came into full view of the handsome Red Rock buttes and bluffs, which are of a brilliant red, varied with cream-colored strata. Guarding the entrance to the valley of Oak Creek stands a gigantic pyramidal pinnacle of red sandstone, broad and circular at base, receding by a series of rounded terraces to a slender, needle-like point ^{upward} projected hundreds of feet ^{upward}. To the right of this butte is an enormous, rectangular, also isolated, mass of bright red sandstone rock, with facings of white, giving it very much the appearance of some of the mammoth brick structures in New York City - for instance the new 7th Regiment Armory. On either side of these, are lines of broken cliffs of similar structure, and grander proportions which are conspicuous from Fort Verde when bathed in the afternoon sunshine. They are variously ornamented with turrets, towers, Russian domes, Gothic arches and pillars, and the endlessly varying designs of Nature's Architecture.

We saw some large flocks of Gambel's Quails, and, while ^{we were} shooting some of them for supper, Fox came up with us, having failed to shoot an Antelope. He had found the herd twice, but, each time, they discovered him first, and betook them to flight, disappearing immediately from view behind the hills upon which they had been watching. He saw two Mule Deer, a species very common throughout that locality, as we learned from

a man who had been hunting them successfully.

We passed the portal and, silent sentry, and found ourselves in the Red Rock Country. Not only are the rocks bright red, but even the soil was equally brilliant. The valley was broken by an interminable series of little hills, wooded in most places with pinons, cedars and scrub oaks. We soon saw the fringe of deciduous trees bordering Oak Creek, and, as we came out upon the hilltop above the ranche, a splendid grove of tall live oaks, beautiful in their ^{winter verdure} bright greenness, was seen beneath us, extending for some distance parallel with the stream.

As we were pitching our little "A" tent, I saw and picked up the skull of a large Bear, which had recently been killed in Indian Garden, six miles further up the creek.

Lieut. Carrington and myself then started out with rod and gun, respectively, in quest of sport, and expecting trout for supper.

I followed the creek, which is a clear, cold mountain stream having its source in San Francisco Mountain about fourteen (14) miles from Flagstaff. It is cold all through the year, and contains trout of delicious flavor, some of which attain to nine pounds weight. It is a tributary of the Verde River which it enters about six or seven miles north of the Post.

As I descended the stream for a mile and a half, I found it bordered with alders as fine and large as beech-trees, and large sycamores and other deciduous trees. There were a few large yellow pines, and the evergreen referred to at length above. The hillsides were densely covered with scrub oaks of two species, both evergreen, and one of them producing holly-like, glossy leaves with bristly long

sharp spines upon their angles. A slender, spreading and thorny mesquite grows plentifully among the scrub. Grapes grow luxuriantly in the somewhat alluvial bed of the stream. I saw no game save a pair of Golden-eyed Ducks - beautiful old males!

The trout refused to bite for Mr. Carrington, and I, likewise, was obliged to return to camp without game, excepting a cotton-tail rabbit, upon which we breakfasted next day and one Gambel's Quail which came to life when I threw it down beside our camp-fire and whurred out of sight in the dusky twilight much to my astonishment and my companions' merriment.

After dining on Gambel's quails and commissaries we retired for the night. To-day the following named animals were seen:

Mammals: -

1. Canis latrans. Prairie Wolf; Coyote. A traight.

2. Ursus americanus. Black Bear. The skull secured to-day is the only bear sign we saw on the trip.

The ranchmen said that they never saw them during winter, although the species is not uncommon during the rest of the year. One man told me that they do not hibernate in caves or holes, but sleep on ledges or benches of the cliffs in the most inaccessible situations. He had never seen them thus asleep himself, but had seen several of their forms or nests which were excavated to a little depth.

Private Fox had seen plenty of Bear's tracks in Indian Garden on a previous visit in summer.

3. Spermophilus grammurus. Rocky Mountain Pine-tailed Squirrel. One seen on a rocky bank beside Beaver Head. This species, like Tamias harrisi only comes out during the warm part of the day during winter, and, at least partially hibernates in severe spells of weather.

4. Thomomys talpoides umbrinus. Southern Pocket Gopher. Signs abundant.
5. Neotoma "Trade-Rat". Their chip houses were built in bushes and cacti all along the route.
6. Lepus sylvaticus arizonae. Desert Hare. The one shot on Oak Creek is indistinguishable from those from the Verde Valley, which are distinctly of this variety (i.e. arizonae).
7. Lepus callosus texianus. Northern Packtrail Hare. Very abundant on Oak Creek.
8. Canis macrotis. Mule Deer. Fox saw two. The species is here abundant.
9. Antilocapra americana. Prong-Horn Antelope. One herd of 14 seen. The species is common in this general region in suitable places.

Birds. -

1. Sialia mexicana. Californian Bluebird.
2. Myiadestes townsendi. Townsend's Solitaire. A few were seen among cedars upon hillsides, usually perching erect like a Flycatcher upon a dry branch, and softly whistling from time to time.
3. Regulus calendula. Ruby-crowned Kinglet. Abundant everywhere in wooded places.
4. Cathartes mexicanus conspersus. Canyon Wren's White-throated Wren. As I walked down Oak Creek, carefully scrutinizing every water-fall and ripple in the turbulent stream in the hope of discerning the form of the American Water Ouzel (Cinclus mexicanus), I heard a note which I supposed came from that bird. It resembled the sound produced by drawing some object rapidly over the teeth of a comb. Soon I saw the performer. However, and it was this little Wren, hopping among the driftwood beside the brook. Both this species and the Canyon Wren (Dalmanites obscura) were

- a nuisance for the immediate vicinity of water during winter.
5. Lanius ludovicianus excubitorides. White-rumped Shrike. A few seen en route.
 6. Carpodacus frontalis. House Finch. Common on the Verde and Beaver Creek.
 7. Zonotrichia gambeli intermedia. Intermediate White-crowned Sparrow. In bushes.
 8. Junco ^{near Ft. Verde.} Abundant.
 9. Pipilo maculatus megalonyx. Long-spurred Towhee. None seen until we reached Oak Creek Garden, where a number were seen among the cedars and scrub oaks.
 10. Pipilo aberti. Abert's Towhee. At the crossing and on the lower part of Beaver Creek.
 11. Agelaius phoeniceus. Red-and-buff-shanked Blackbird. One or two females were seen in the corral at Fort Verde.
 12. Scolecophagus cyanocephalus. Brewer's Blackbird. About the corrals.
 13. Lynniocitta cyanocephala. Maximilian's Nuthatch. In flocks in the Red Rock.
 14. Cyanocitta stelleri macrolopha. Long-crested Jay. One seen in the Red Rock.
 15. Aphelocoma woodhousei. Abundant wherever there were cedars and scrub oaks.
 16. Sphyrapicus thyroideus. Black-breasted Woodpecker. One was seen to alight in an isolated pinon tree at the entrance to the Red Rock Country, where I shot it. Its note is distinctive; but as this was only the third specimen I have ever met with, and the first female, I was too much interested in its capture to retain in memory its note, which struck me as being singular.
 17. Colaptes auratus mexicanus. Red-shafted Flicker. There were usually a few wherever there was any timber at all.

18. Bubo virginianus subarcticus. Western Horned Owl. Hooting at night on Oak Creek.
19. Buteo borealis calurus. Western Red-Tail.
20. Aquila chrysaetus canadensis. American Golden Eagle. A pair of these splendid birds were sailing about the cliffs at the entrance to the Red Rock country.
21. Zenaidura macroura. Mourning Dove. On the bank of Verde River & Beaver Creek.
22. Lophortyx gambeli. Gambel's Quail.
23. Ardea herodias. Great Blue Heron. One standing in the Verde near the crossing, did not fly at all, and could have been shot from the buckboard. They have been excessively shy; and I think that this must have been an early migrant that had not learned caution.
24. Clangula glaucum americana. American Golden-eyed Duck. Two on Oak Creek.

January 15th 1885. - Smith stayed in camp to look and look after the things, and the rest of us started out to hunt for Turkeys and Deer. I followed the stream towards the settlements, about ten miles, and covered a good deal of intermediate country besides. I was not long in finding plenty of turkey-tracks in the sand beside Oak Creek and this led me to keep near the stream; but I subsequently learned that they very seldom visit the stream during the middle of the day, but keep in the scrub and cedars on the hills. The tracks were chiefly those of hens and young gobblers; but occasionally the large tracks at a good distance apart showed where some old gobbler had trod. I had never seen a Turkey roost; but Fox had directed me to look for the droppings beneath large dry trees with horizontal arms. I found one roost, and

Fox afterward discovered it also. One new bird was found, and several interesting and valuable specimens were procured. As I returned towards camp about sundown I met Fox and Lieut. Carrington mounted upon mules going to shoot up the Turkey roost which I had found and which Fox had subsequently discovered also. Fox offered to let me ride his mule, and, as I was very much fatigued by an all-day's walk, I gladly accepted. We returned late in the evening with three Turkeys, one of which, the largest gobbler, I shot myself. The following-named animals were seen: Mammals. -

1. Felis concolor. "Mountain Lion". I found the greater part of a skull which had been killed recently, as the dura mater was still intact and many hairs were sticking to it. It was picked up in an almost inaccessible spot, in a cañon ^{on Oak Creek}. No tracks were seen.
2. Canis latrans. Coyote; Prairie Wolf.
3. Procyon hernandezii. Black-footed Raccoon. Tracks were numerous on Oak Creek.
4. Neotoma. "Wood Rat."
5. Thomomys talpoides umbrinus. Southern Pocket Gopher. Signs about the ranches.
6. Lepus sylvaticus arizonae. Desert Hare.
7. Lepus callotis texianus. Northern Jackass Hare. Abundant. One shot by me.
8. Capreolus macrotis. Mule Deer. Tracks numerous.

Birds. -

1. Keylocichla inualashkai audubonii. Rocky Mountain Hermit Thrush. One was seen beside Oak Creek, and the specimen secured.
2. Sialia mexicana. Californian Bluebird.
3. Mniotilta townsendi. Townsend's Solitaire. A number were seen, usually in pairs.

- I shot one but could not find it. Their note was a low, short whistle, which at times is loud and startling. They are very shy.
4. Regulus calendula. Ruby-crowned Kinglet. Very abundant. I have never heard it singing in Arizona.
5. Lophophanes inornatus. Plain Titmouse. A few among the cedars.
6. Lophophanes wollweberi. Bridled Titmouse. A few yards from camp brought me into the midst of a flock of these elegant little birds. Their acquaintance I had first made a fortnight ago on Beaver Creek near the largest ruined pueblo or cave dwelling; but only one was distinctly seen, and I was unable to procure a specimen. So it was with much pleasure that I watched their movement along the creek, for flocks were encountered every now and then in the bushes and deciduous trees in the creek bottom all the way down to the settlement and back again. Their notes are very like the winter notes of the Eastern Chickadee (Parus atricapillus), and their habits are similar too. They are often seen upside down clinging to a cluster of dry leaves hunting for insects. Its action is sprightly and vivacious, and it is gentle and unsuspecting. I easily secured six specimens, and might easily have taken many more. I shot one that was gleaning in a bunch of leaves which contained a web of some insect. When I fired the shot cut off the branch and the bird's feet became entangled in the web, and it was carried to the ground along with the falling branch, when I released it.
7. Catherpes mexicanus conspersus. White-throated Wren; Leconte Wren. It was found again beside Oak Creek, where I shot a specimen in the driftwood on the bank.

8. Junco. Very abundant every where.
9. Junco dorsalis. Red-backed Junco. The only individual seen on the trip was shot beside Oak Creek, where it had doubtless lingered since the severe cold and snow of a few weeks ago, which probably drove these beautiful and hairy Juncos down from the mountains.
10. Pipilo maculatus megalonyx. Long-spurred Towhee. Very abundant in the scrub oaks.
11. Gymnocitta cyanocephala. Maximilian's Nuthacker. In large flocks, feeding upon the berries of the cedars in which they alight in great numbers, but are too shy to be easily shot, although numbers could be killed at a ^{single} shot if they could be approached when feeding.
12. Apeloeona woodhousei. Woodhouse's Jay. Very abundant.
13. Peis villosus harrisi. A few in the large trees bordering Oak Creek.
14. Sphyrapicus varius nuchalis. Red-naped Woodpecker. One or two seen on Oak Creek. Their note is indistinguishable from that of the Eastern Yellow-bellied Woodpecker (S. varius). It is harsh and Jay-like. They were quite shy.
15. Colaptes auratus mexicanus. Red-shafted Flicker. Abundant, especially in deciduous timber beside the creek.
16. Bubo virginianus subarcticus. Western Horned Owl. Heard at night.
17. Accipiter fuscus. Sharp-shinned Hawk. An adult female shot.
18. Buteo borealis calurus. Western Red-tail.
19. Aquila chrysaetos canadensis. American Golden Eagle. One pair seen.

20. *Meleagris gallopavo*. Mexican Turkey.

During the day, Turkey tracks were seen in abundance, and a roost was discovered at the base of a high butte of ~~Red~~ red rock, six miles from camp, in the creek bottom. The droppings were found beneath several large sycamores and ^{were} especially abundant under a tall, bare pine-tree close-by. We visited the roost at sundown and saw fresh tracks, made since we were there during the day, proving that the Turkeys were somewhere in the vicinity. After cautiously examining the topography of the spot we withdrew to where we had left the mules, and built a fire to keep us warm until the Turkeys were settled for the night, and awaited the onslaught with impatience. We returned to the roost at dusk, and, as we approached, the first Turkey was seen upon the topmost branch of the dead pine; but it seemed to have taken to alarm or was not yet settled for the night. Its neck was stretched upward to its full length and it moved restlessly upon its perch. We sat down upon the bank of an arroyo and waited patiently for half an hour, until all were quiet upon the tree. Three could be seen from our position. Their heads were drawn down into the feathers and they were evidently sleeping. Then we cautiously advanced, but could not avoid making considerable noise among the dry brushwood thickly covering the ground; but the Turkeys were not disturbed. We got nearly under them and then Lieut. Carrington whispered to me: "Dr., there's your big gobble sitting alone to the right. I will fire at those two together in the middle of the tree. Fox will take those on the left side: one! two! three! bang! bang! bang - bang rang out the shotguns."

Of the six Turkeys sitting on the tree, four fell to our shots. My gobble fell perfectly dead, but two wounded birds were heard fluttering off through the bushes. I shouted "Come and catch the wounded birds. They're all gone," and Lieut. Carrington and myself dashed through the brushwood after the wounded Turkeys. My escaping bird led me a chase through a tangle of grapevines, brushwood, ^{gnarled} bushes, over water courses, arroyos and stones. Every now and then I grabbed frantically at the tail of the prostrate Turkey as it fluttered through a bush, but it ever managed to elude my grasp, and finally escaped and could not be found. When I returned to the roost, I found that Mr. Carrington had met with better success and had captured his bird and found the two others; but had lost his gun in the pursuit. He could have shot an other Turkey, but could not find his gun. While pursuing the wounded one, I heard a number of turkeys fly overhead. They had been roosting on adjoining trees, and, had we been careful and looked for them, we could have shot many more. Even after I returned a Turkey flew from a tree right overhead. After a little search Fox found the missing gun and we gathered up the spoils, and made our way back to the mules and our fire. It was impracticable to follow the creek and our course lay through a steep, rocky cañon. We could not see the trail; but the mules picked their way along without difficulty. We looked down into the black depths of the cañon with dread, but were soon safely out of it and found the wagon-road which we followed home to camp, where we examined our game, and found that the two gobblers were immature, with spurs just developing.

although they weighed about twenty-five pounds apiece. The hen was also a young bird. The fried pork, and beans, tasted good, after fasting since morning; and we were glad to turn in to our blankets for the night.

21. Lophortyx gambeli. Laurel's Quail. Large flocks about camp. We shot as many as we cared for, to eat.

January 16th, 1885. I had intended to hunt for the hills and up the creek to-day; but I learned that I could catch the wounded Turkey left near the roost that we fired into last night. So Smith and myself went down there the first thing. Smith took a rifle, intending to hunt Deer, and rode a mule; but I walked and carried my shotgun. We traced its course by scattered feathers among the bushes, and after much trouble and careful hunting in the close cover, Smith flushed the bird. It arose with a loud whirr, as of a whole flock of ducks. I could not see it; but Smith marked it down among the scrub oaks upon a distant hillside, more than 300 yards distant. There Smith fired at it with his rifle. Then it flew once more, but immediately fell to my shot, but hobbled off under a bush and settled down upon the ground until we thought it was dead; but when Smith tried to catch it, away it flew 200 yards. Smith again missed it with his rifle; but I stole softly up and got a close shot that ended its existence.

Trapped my Turkey, an old hen, up carefully and gave it to Smith to carry, on the mule, and then followed Oak Creek back to camp, shooting small birds along the way.

I found Smith in camp when I returned.

Kee had shot nothing. Later in the afternoon Fox, who had ridden up to Indian Garden to hunt up a Turkey-roost, returned without any game, but had seen two flocks of Turkeys and two of Massena Quails. After dining upon Quail and Rabbit, we once more wound our mules to the Turkey-roost, and went through the same preliminaries as last night; but not a Turkey returned to the spot. We returned to camp, weary and disappointed.

To-day, I saw a few fir-trees (Abies). The following is a list of the animals seen today.

Mammals:

1. Canis latrans. Coyote; Prairie Wolf.
2. Thomomys talpoides umbrinus. Southern Pocket Gopher.
3. Neotoma Wood Rat.
4. Lepus sylvaticus arizonae. Desert Hare.
5. Lepus callosus texianus. Northern Jackass Hare.

Birds:

1. Phylloscopa unalaschkae audubonii. Rocky Mountain Hermit Thrush. One was seen on Oak Creek. It flew across the stream, where I could not conveniently get at it if shot; so I contented myself with watching it. A low "chuck" was the only note heard.
2. Sialia mexicana. Californian Bluebird.
3. Myiadestes townsendi. Townsend's Solitaire. One was again shot, but could not be found. They sang exquisitely, and flew about in pairs, very shy, keeping to the treetops and uttering a short whistle. They feed on cedar berries.
4. Regulus calendula. Ruby-crowned Kinglet. I have found this bird in company with Geothlypis trichas every day since we came here. It is fond of society, and the only other small species is Lophophanes, and they

- are too restless and active to suit the Kinglet.
5. Lophophanes inornatus. Plain Titmouse.
 6. Lophophanes wollweberi. Bridled Titmouse.
 7. Leathaspes mexicanus conspersus. White-throated Wren. Beside the Creek as usual and on the red cliffs adjoining.
 8. Carpodacus frontalis. House Finch.
 9. Chrysomitris pinus. Pine Finch. A single one flew over our camp just after daylight.
 10. ? Junco hyemalis. Eastern Junco. Juncos were seen which I supposed were this species, but they were mixed with another species, and when I shot into them I only killed the others. The identification was, therefore, not positive.
 11. Junco. Very abundant.
 12. Amphispiza belli nevadensis. Sagebrush Sparrow. One shot.
 13. Melospiza fasciata. Song Sparrow.
 13. Pipilo maculatus megalonyx. Long-Spurred Towhee. Abundant.
 14. Gymnocitta cyanocephala. Maximilian's Nuthacker. Feeding in large flock upon the ground and in cedars.
 15. Gymnocitta stelleri macrolopha. Long-crested Jay. Several seen.
 16. Aphelocoma woodhousei. Woodhouse's Jay.
 17. Picus villosus harrisi. Harris's Woodpecker.
 18. Sphyrapicus varius nuchalis. Red-naped Woodpecker. Several seen in deciduous woods along Oak Creek, and in the grove of live oaks near camp they were abundant. One male was shot in which the red throat extended into the back chest patch, approaching slightly to var. ruber of the Pacific Coast.
 19. Colaptes auratus mexicanus. Red-shafted Flicker. Abundant.

20. Bubo virginianus subarcticus. Western Horned Owl.
21. Finnunculus sparverius. Sparrow Hawk.
22. Accipiter fuscus. Sharp-shinned Hawk.
23. Buteo borealis calurus. Western Red-tail.
24. Meleagris gallopavo. Mexican Turkey. Fox saw two flocks up the Creek. One flock was feeding on corn in a crib in Indian Garden. The other was seen in the Creek bottom several miles this side.
25. Lophortyx gambeli. Gambel's Quail.
26. Lyrtonyx massena. Massena Quail. Fox saw a flock in a rocky cañon amongst the greasewood on the steep hillside. They were calling in their curious way, and did not fly at all. He did not fire at them as he had only a rifle. A second flock was seen in the Creek bottom.
27. Anas boschas. Mallard. Fox saw one in Indian Garden. Ducks have been seen flying up stream every day, but were not specifically identified.

January 17th, 1885. To-day, Fox and myself rode up to Indian Garden, following the trail. We hunted for Massena Quails, but saw none until we reached Indian Garden. The trail led over some steep and rocky hills commanding excellent views of the landscape which was beautiful. A few Deer tracks, and a Mountain Lion track were seen. Indian Garden is the cañon in which Oak Creek flows. Our trail for a little way ran parallel to it upon the hillside. The soil is richer than any other that I have seen in Arizona, and the vegetation is luxuriant. The groves of large live oaks were, to me, the greatest attraction. Deciduous trees of large size were numerous, while beneath the wood, the ground was densely

Antrozous pallidus.
 No. 100. [Long-eared Bat. ♀ ad. Fort Verde, A.T. May 23, 1884.
 Nose to eye, 8; ear, 16; occiput, 22;
 root of tail, 64; Tail, 48; Ears, height, 32;
 breadth, 23; Alar expanse, 34.5; Forearm, 51;
 Phalanges, 83; Leg, 20; Foot, hind with cl. 12; cl. 2.5;
 Alar toe and claw, 12; claw, 3; Height of
 process of ear, 15; breadth at widest
 part, 4. Flew into Post Hospital & killed by Steward.

Antrozous pallidus.
 No. 101. Long-eared Bat. ♀ ad. Fort Verde, A.T. May 23, 1884.
 Nose to eye, 8; ear, 16.5; occiput, 23; root of
 tail, 65; Tail, 48; Ears, height, 30; breadth 24;
 Height of process of ear, 16; greatest
 breadth, 4; Alar expanse, 35.9; Forearm, 52;
 Fore-foot, 89; Leg, 20.5; Hind-foot including
 claw, 11; claw, 2.5; Length of alar toe and
 its claw, 11; claw alone, 3.
 Flew into our dining-room at night.]

overgrown with the rank herbage of last season. The stream was rapid and boisterous, but as before I looked in vain for the Mexican Water-Cuzel (Cinclus mexicanus) which I fully expected to find. I still believe that the species must be present along parts of the stream, and hope for better fortune in hunting for them another time.

We left our horse and mule in the trail, and cautiously advanced toward the corn-crib, built of rails, which Fox had converted into a Turkey trap by making a hole in the side, low down and strewing corn through the opening and scattering it inside. The Turkey, once inside never thinks of stooping and escaping through the low opening but runs about in excitement trying to escape. When we came upon the crib, nothing was seen but dozens of Long-crested Jays, which had eaten up all of the bait; and no

Turkeys were in the trap. Some bird of prey had eaten a Massena Quail upon the crib, where we found its scattered plumes, and immediately set out to hunt for them when we had satisfied ourselves that no Turkeys were near, which we did by calling with the hollow radius of a Turkey's wing. If any Turkeys are near, they will always answer the call. Fox was the first to find the Massena Quails. He found them drinking at a spring, and they instantly scattered in flight several flying towards me. I noticed that the sexes were plainly distinguishable when flying, even at a distance. They ran and flew a short distance alternately until well up on the steep hillside of sliding rocks covered with long grass and low scrub oaks, affording the very finest kind of cover. As I clambered up this difficult slope, one after another they flew up before me, always from right in front of me, uttering their singular notes, and generally taking me when badly balanced and unprepared. I got three shots and brought down two birds, a pair, but the male could not be found, as I failed to mark the spot when pressing forward after the rest. Fox was likewise unfortunate and failed to recover any of his birds.

The middle of the day was spent in exploring Indian Garden as far up as the junction of Little and Big Oak Creeks. A new bird, the Brown Creeper, was there seen but not secured, and many other species of interest were abundant. The vegetation is stronger than in any spot I have seen in Arizona. The Indians had gardens here before driven upon the Reservations, thence its present name.

Descending Oak Creek towards camp, we hunted carefully for Turkey geese but unsuccessfully. In one place I surprised Fox at what my horse "Daisy", would do. In a canon across the stream were some dead trees, and as Turkey tracks were numerous, Fox thought they must roost there, as we had failed to find in roosting trees on the stream. The bank upon the opposite side was high and the water deep. I rode Daisy across in the shallowest place, threw down the bridle rein into the ice-cold water, and stepped up upon the high bank, leaving her standing in water up to her belly, while I hunted up the canon. When I returned, the horse had not moved, and allowed me to step upon her back from above. I put poor Daisy to this severe test with some misgivings, as a matter of necessity, and she did not fail me! No Turkeys or more Messena Quails were seen.

In the evening Fox rode down the Creek half an mile, and came into camp and reported that a large flock of Turkeys were going to roost there. We immediately set out. Lieutenant Carrington and myself rode upon Daisy, and Fox rode the mule. We floundered through the creek over the smooth boulders at two places, and then left the mule and horse behind. We only found three Turkeys. From their large size we knew them to be gobblers. They were perched singly upon three ~~very different~~ adjoining trees. Mr. Carrington counted and we each fired at a Turkey. My bird flew when I fired at it. The two others did not move until fired at a second time. My bird appeared to be hard hit; and we distinctly heard the sound of Carrington's gobbler upon the bank above us. After hunting for the Turkeys we returned, a crest-fallen trio, to camp, after shooting into a couple of

last year's hawk's-nests which we supposed were Turkeys.

The following-named animals were seen:

Mammals.—

1. Felis concolor. "Mountain Lion". An old track was seen.
2. Canis latrans. Coyote; Prairie Wolf.
3. Conepatus mapurito. White-backed Skunk.

A specimen of this animal was secured but could not be skinned on account of the vile odor; but I overcame my repugnance sufficiently to cut out its skull and preserved that alone. I found it on Fouts Creek in October, and at one or two points between Fort Verde and Whipple Barracks. It is common in the Verde Valley. Nevertheless, we read in Dr. Coues' monograph of the family (Mustelidae), published in 1877, as follows: "Audubon and Bachman describe the animal from Texas. The only specimen Baird had seen in 1857 was also from this State (Llano Estacado), beyond which I am not aware that the animal has been actually observed north of the Mexican border. I obtained no evidence of its presence in New Mexico, Arizona, or Southern California during my residence in those regions, and the species may be confined, in the United States, to the valley of the Lower Rio Grande, like various other quadrupeds and birds."

4. Procyon hernandezii. Black-footed Raccoon. Track abundant everywhere along Oak Creek.
5. Spermophilus grammurus. Rocky Mountain Pine-tailed Squirrel. One in Indian Garden near the corn-crib, where it had been eating corn.
6. Castor fiber canadensis. American Beaver. A number of small saplings had been cut along the stream; but no large trees were seen which were cut by beavers.

7. Thomomys talpoides umbrinus. Southern Pocket Gopher.

8. Neotoma Wood Rat

9. Lepus sylvaticus arizonae. Desert Hare.

10. Lepus callotis texianus. Northern Jackass Hare.

Birds:-

1. Hylocichla ustulata audubonii. Rocky Mountain Hermit Thrush. One was seen at the junction of Little and Big Oak Creeks. Another was seen in a tree top halfway towards camp, on the Creek.

2. Myiadestes townsendi. Townsend's Solitaire.

3. Regulus calendula. Ruby-crowned Kinglet.

4. Tophophanes inornatus. Plain Titmouse.

5. Tophophanes wollweberi. Bridled Titmouse.

6. Psaltiriparus plumbeus. Lead-colored Bush Titmouse. One flock near Oak Creek.

7. Sitta carolinensis aculeata. Slender-billed Nuthatch. Seen along the trail and common in Indian Garden.

8. Certhia familiaris (? mexicana). Brown Creeper. One was shot, but fell in the creek and could not be secured. I fired at another but did not kill it. These two were the only ones I have actually seen in Arizona; but I often thought I heard its prolonged whizzing note as I rode through the pine forests of the Mogollons last October; but the note of Parus montanus is so similar that I cannot be certain.

9. Catherpes mexicanus conspersus. White-throated Wren. Commonly seen and heard.

10. Dendroica audubonii. Audubon's Warbler. A few were seen in Indian Garden. The only ones seen on the trip.

11. Junco (? hyemalis). Eastern Junco. I thought I saw several with other Juncos but did not positively identify them.

12. Junco

13. Amphispiza belli nevadensis. Sagebrush Sparrow.

14. Melospiza fasciata Song Sparrow.

One seen in Indian Garden.

15. Pipilo maculatus megalonyx. Long-spurred Towhee

16. Gymnocitta cyanocephala. Maximilian's Nuthatch; Pinon Jay.

17. Gymnocitta stelleri macrolopha. Long-crowned Jay. Abundant in Indian Garden.

18. Sphelocoma woodhousei. Woodhouse's Jay.

19. Preus villosus harvii. Harrier's Woodpecker.

In Indian Garden and other parts of Oak Creek.

20. Preus varius nuchalis. Red-naped Woodpecker. Abundant in the live oaks of Indian Garden, where its Jayish note was continually heard.

21. Colaptes auratus mexicanus. Red-shafted Flicker. Common, especially in Indian Garden.

22. Geococcyx californianus. Road-runner.

Some hillsides about a mile above camp are thickly strewn with mala pai and closely covered with the flat-jointed cacti - just the home song of the Pisano, as the Mexicans call this bird. I fired at one from a hilltop. The shot scattered around it and, in its sudden fright it betook itself to flight and skimmed easily around the sloping hillside, alighted a hundred yards from the starting place and then ran swiftly out of sight. I have several times seen them fly thus.

23. Buteo borealis calurus. Western Red-tail.

24. Meleagris gallopavo. Mexican Turkey.

See notes of to-day's adventures above.

25. Lophortyx gambeli. Gambel's Quail.

26. Cryptonyx massena. Massena Quail. See notes above.

27. Anas boschas. Mallard. One in Indian Garden.

28. Notton carolinensis. Green-winged Teal.

* 29. Melanerpes formicivorus. Californian Woodpecker. Hermit in Indian Garden; the only one seen.

January 18th, 1885. To-day we returned, quite to my regret, to Fort Verde, where we arrived at 1:30 o'clock P. M. I hunted for two hours before starting, and rode Daisy all the way home on a steady trot.

Fox's knee was so painful from a mule's kick that he did not care to go with me down the creek to hunt for the wounded Turkeys, so I went alone, and reached the place just at daylight. Suddenly the gobbler began to gobble and frightened the horse, so that I could not get her across the stream to where the Turkeys were. They were just leaving their roosting place in the creek bottom and I could probably have ridden up and shot one of the gobblers had my horse behaved well. As it was ran to the edge of the stream where I heard some hens calling upon the bushy hillside on the opposite bank. The gobblers were in the level creek bottom below me and their loud gobbling came nearer and nearer, while the hens were seen occasionally just across the stream running through the scruboaks. They ran like Quails up the hillside to avoid a high rock, and stood for several minutes upon a point of rock. I was just going to shoot at several of them standing together, when I heard a gobbler close by, coming up the stream, and as I had a hen, and was particularly anxious to have an old, spurred gobbler of my own shooting, I held my shot and waited for him to come up upon the opposite bank. One of the hens flew down the hillside to where the gobblers were calling and gobbling. The gobbler was now close to where I was hiding, but turned up the hillside among the dense brushwood, and escaped. I hunted for the

flock and for the two wounded birds, but failed to find either of them; and so we were obliged to leave Oak Creek with only four Turkeys. The Buckboard awaited me at the top of the hill, where I disappointed the rest of the party by appearing empty handed, as they fully expected that I would get one or two of the Turkeys shot at last night.

The following is a list of the animals seen:
Mammals.

1. Thomomys talpoides umbrinus. Southern Pocket Gopher.

2. Neotoma

While hunting for St. C's Turkey I saw a large mound built in the center of a bunch of cacti in an oak bush. I jumped upon it and a Rat ran out and skulked beneath the bushes. I saw it, and fired a charge of Turkey shot at it, but did not hit it.

3. Lepus sylvaticus arizonae. Desert Hare.

4. Lepus callosus texianus. Northern Jackass Hare.

Birds.

1. Geothlypis trichas. Grasshopper Sparrow.

One was seen between the Red Rock butte and Beaver Head, and the species was common along Beaver Creek and on Verde River.

2. Sialia mexicana. Californian Bluebird.

3. Sialia arctica. Rocky Mountain Bluebird.

Large flocks were seen.

4. Myiadestes townsendi. Townsend's Solitaire.

5. Regulus calendula. Ruby-crowned Kinglet.

6. Troglodytes aedon. Plain Titmouse.

7. Troglodytes aedon. Drilled Titmouse.

Only on Oak Creek.

8. Catherpes mexicanus conspersus. White-throated Wren.

9. Lanius ludovicianus excubitorides. White-rumped Shrike.

10. Corvus frontalis. House Finch.

11. Zonotrichia gambeli intermedia. Intermediate
Crown-Sparrow.
12. Junco
13. Amphispiza belli nevadensis. Sagebrush Sparrow.
14. Pipilo maculatus megalonyx. Long-Spurred Towhee.
15. Pipilo aberti. Abert's Towhee. Lower Beaver Creek.
16. Sturnella neglecta. Western Meadow Lark.
Common in grassy places all along from
the Red Rock to Verde.
17. Scolecophagus cyanocephalus Brewster's Blackbird.
At Fort Verde.
18. Gymnocitta cyanocephala. Maximilian's Nuthatch.
19. Cyanocitta stelleri macrolopha. Long-Crested
Jay. In the Red Rock Country.
20. Aphelocoma woodhousei. Woodhouse's Jay.
Wherever cedars and oaks grow.
21. Picus villosus harrisi. Harris's Woodpecker.
22. Sphyrapicus varius nuchalis. Red-naped
Woodpecker. About camp on Oak Creek.
23. Colaptes auratus mexicanus. Red-shafted Flicker.
24. Geococcyx californianus. Road Runner.
One seen on Beaver, near the Verde River.
25. Fimbriculus sparverius. Sparrow Hawk.
26. Accipiter fuscus. Sharp-shinned Hawk.
27. Buteo borealis calurus. Red-tailed Hawk.
28. Meleagris gallopavo. Mexican Turkey.
See above notes of to-day's doings.
29. Lophortyx gambeli. Gambel's Quail.
30. Anas boschas. Mallard. A large flock
on Beaver Creek. Many other Ducks
were flying over the Verde River which were
not identified.

Note. No Reptiles or Batrachians were seen on the trip. A species of Unio was the only shell seen along Oak Creek. The Trout could not be induced to bite, but I saw several very large ones, and some small minnows were seen in one or two places. No ichthyological specimens were taken.

The following is a complete list of all the species of Birds seen on the trip, showing when they were noted:

Name of Species.	Jan. 14 th .	Jan. 15 th .	Jan. 16 th .	Jan. 17 th .	Jan. 18 th .
<u>Thylocichlaunalashkai audubonii</u> .		x	x	x	
<u>Harporhynchus crissalis</u> .					x
<u>Sialia mexicana</u> .	x	x	x		x
<u>Sialia arctica</u> .					x
<u>Myiadestes townsendi</u> .	x	x	x	x	x
<u>Regulus calendula</u> .	x	x	x	x	x
<u>Lophophanes inornatus</u> .		x	x	x	x
<u>Lophophanes wollweberi</u> .		x	x	x	x
<u>Saltriparus plumbeus</u> .				x	
<u>Litta carolinensis aculeata</u> .				x	
<u>Certhia familiaris</u> (! <u>mexicana</u>).				x	
<u>Cathartes mexicanus conspersus</u> .	x	x	x	x	x
<u>Dendroica audubonii</u> .				x	
<u>Lanius ludovicianus excubitorides</u> .	x				x
<u>Carpodacus frontalis</u> .	x		x		x
<u>Chrysomitris pinus</u> .			x		
<u>Zonotrichia gambeli intermedia</u> .	x				x
<u>Junco</u> (! <u>hyemalis</u>).			x	x	
<u>Junco</u> .	x	x	x	x	x
<u>Junco dorsalis</u> .		x			
<u>Amphispiza belli nevadensis</u> .			x	x	x
<u>Amphispiza fasciata</u> .				x	
<u>Pipilo maculatus megalonyx</u> .	x	x	x	x	x
<u>Pipilo aberti</u> .	x				x
<u>Agelaius phoeniceus</u> .	x				
<u>Sturnella neglecta</u> .					x
<u>Scolecophagus cyanocephalus</u> .	x				x
<u>Gymnocitta cyanocephala</u> .	x	x	x	x	x
<u>Cyanocitta stelleri macrolopha</u> .	x		x	x	x
<u>Aphelocoma woodhousei</u> .	x	x	x	x	x
<u>Picus villosus harrisi</u> .		x	x	x	x
<u>Sphyrapicus varius nuchalis</u> .		x	x	x	x
<u>Sphyrapicus thyroideus</u> .	x				

Name of Species.

	Jan. 14 th	Jan. 15 th	Jan. 16 th	Jan. 17 th	Jan. 18 th
<i>Melanerpes formicivorus</i> .				x	
<i>Colaptes auratus mexicanus</i> .	x	x	x	x	x
<i>Geococcyx californianus</i> .				x	x
<i>Buteo virginianus subarcticus</i> .	x	x	x		
<i>Tringoides flaviventris</i> .			x		x
<i>Accipiter fuscus</i> .		x	x		x
<i>Buteo borealis calurus</i> .	x	x	x	x	x
<i>Aquila chrysaetus canadensis</i> .	x	x			
<i>Zenaidura carolinensis</i> .	x				
<i>Meleagris gallopavo</i> .		x	x	x	x
<i>Lophortyx gambeli</i> .	x	x	x	x	x
<i>Cyrtonyx massena</i> .			x	x	
<i>Ardea herodias</i> .	x				
<i>Anas boschas</i> .			x	x	x
<i>Nettion carolinensis</i> .				x	
<i>Colaptes auratus mexicanus</i> .	x				

The only Mammals collected were three skulls.

Felis concolor. Panther; Mountain Lion. Adult.

Oak Creek. Jan. 15th, 1885.

Ursus americanus. Black Bear; Brown Bear. Adult.

Indian Garden. Oak Creek. Jan. 14th, 1885.

Skull (except lower jaw) and one cervical vertebra.

No. 239. *Conchatus macrurus*. White-backed Skunk.

♂ ad. Indian Garden, Oak Creek, Arizona.

Skull and one claw. (fresh). Jan. 17th, 1885.

Birds Collected:

Oak Creek, A.T., January 14th, 1885.

3700 *Sphyrapicus thyroideus*. ♀ ad.

240; 425; 140; 100; culmen, 26.5; gape, 28.5; tarsus, 21; middle toe and claw, 23; claw, 9.

Iris, hazel. Bill, blue-black. Tarsi and toes, plumbeous; claws, plumbeous-black.

3701. *Hylocichla unalashkæ audubonii*. ♂ ad. Oak Creek, Jan. 15th, 1885.

183; 285; 93; 75; bill from nostril, 9; gape, 19; tarsus, 31; middle toe and claw, 23; claw, 6.

Irides, hazel. Bill, brownish-black, with

Oak Creek, A.T. Jan. 15th, 1885.

basal half of mandible, yellow. Tarsi, brown. Feet and claws, dusky-brown.

3702. *Cathartes mexicanus conspersus*. ♀ ad.

140; 184; 62; 55; culmen, 20; bill from nostril, 15; gape, 23; tarsus, 16.5; middle toe and claw, 17; claw, 4. Irides, hazel. Bill, with maxilla and tip of mandible, brown; residue of mandible flesh-color. Tarsi, deep brown. Feet and claws, dusky-brown.

3703. *Junco hyemalis shufeldti*. ♀ ad.

(2nd tail-feather black on inner half.) 157; 240; 77; 70; culmen, 11; gape, 11; tarsus, 20; middle toe and claw, 19; claw, 5. Iris, hazel. Bill, rosy flesh-color, very slightly tipped with black. Tarsi, fleshy-brown. Feet, dark-brown; claws, brownish-black.

3704. *Junco annekeus*. ♂ ad.

(Very similar in colors to the above specimen, but the ash of head and throat are purer and lighter. The two outer tail-feathers and greater part of the 3rd are white.) 166; 261; 87; 80; culmen, 11; gape, 11; tarsus, 21; middle toe and claw, 19; claw, 5. Colors of parts exactly like No. 3703.

3705. *Lophophanes wollweberi*. ♂ ad.

130; 204; 66; 58; culmen, 8.5; gape, 10; tarsus, 18; middle toe and claw, 15; claw, 5. Irides, hazel. Bill, dusky-plumbeous. Feet and claws, and tarsi, plumbeous.

3706. *Lophophanes wollweberi*. ♀ ad.

128; 204; 65; 61; culmen, 8; gape, 10; tarsus, 18; middle toe and claw, 15; claw, 4.3.

3707. *Lophophanes wollweberi*. ♂ ad.

127; 205; 65; 64; culmen, 8.5; gape, 10.5; tarsus, 17; middle toe and claw, 15; claw, 4.5.

3708. *Lophophanes wollweberi*. ♀ ad.

129; 204; 65; 62; culmen, 8.5; gape, 10; tarsus, 17; middle toe and claw, 15; claw, 5. Colors of parts like No. 3705.

- Oak Creek, A.T. January 15th, 1885.
- 3709 *Lophophanes wollweberi*. ♀ ad.
125; 195; 62; 60. Culmen, 8; gape, 9.5;
tarsus, 18; middle toe and claw, 14.5; claw, 4.5.
3710. *Lophophanes wollweberi*. ♂ ad.
130; 205; 67; 60. Culmen, 8.5; gape, 9.5;
tarsus, 17.5; middle toe and claw, 14; claw, 5.
3711. *Junco dorsalis*. ♂ ad.
167; 252; 80; 78; culmen, 11.5; gape, 13;
tarsus, 21; middle toe and claw, 19; claw, 5.
Irides, hazel. Bill, with maxilla brownish-black.
Mandible, flesh-color; tarsi, light brown;
feet, brown; claws, dusky-brown.
- ✓3712. *Cyanocitta cyanocephala*. ♀ ad.
277; 465; 150; 111; culmen, 31; bill measured
from nostril, 20; gape, 33; tarsus, 39;
middle toe and claw, 32; claw, 9. Irides,
hazel. Bill, tarsi, feet and claws, black.
3713. *Accipiter fuscus*. ♀ ad.
347; 647; 204; 172; culmen and cere, 20;
cere, 9; culmen, 12; gape, 18.5; tarsus, 35;
middle toe and claw, 46; claw, 11. Irides,
orange. Cere, greenish. Bill, plumbeous-black;
pale bluish at base. Tarsi and feet, lemon-yellow.
Claws, plumbeous-black. Stomach empty.
- ✓3714. *Picus villosus parvulus*. ♀ ad.
225; 384; 125; 88; culmen, 29; gape, 31;
tarsus, 21; middle toe and claw 21; claw, 10.
3715. Oak Creek, A.T. January 16th, 1885.
Lophophanes wollweberi. ♀ ad.
128; 195; 65; 61; culmen, 9; gape, 10;
tarsus, 18; middle toe and claw, 14; claw, 5.
Iris, hazel. Bill, dusky-plumbeous. Tarsi, feet
and claws, plumbeous.
3716. *Lophophanes wollweberi*. ♂ ad.
131; 212; 69; 63; culmen, 8.5; gape, 10;
tarsus, 18; middle toe and claw, 15;
claw 4.5. Both shot in live oaks at camp.
Colors the same as No. 3715.

- ✓3717. *Pipilo maculatus megalonyx*. ♂ ad.
211; 270; 88; 102; culmen, 15; gape, 17; tarsus,
28; middle toe and claw, 28; claw, 9. Irides,
reddish-orange. Bill, brownish-black; tarsi, feet
and claws, dark brown.
- ✓3718. *Pipilo maculatus megalonyx*. ♂ ad.
230; 282; 91; 116; culmen, 14; gape, 16;
tarsus, 27; middle toe and claw, 31; claw, 11.
Iris, bright orange. Other parts same colors as
No. 3717.
- ✓3719. *Cyanocitta stelleri macrolopha*. ♀ ad.
307; 445; 141; 138; culmen, 28; bill, measured
from nostril, 19.5; gape, 32; tarsus, 43; middle
toe and claw, 32; claw, 8.
3720. *Meleagris gallopavo*. ♀ ad. (Mexican Turkey.)
Length to end of claws, 1010; 995; 1330; 426; 345;
culmen, 34; bill, measured from nostril, 24; gape,
52; height of bill opposite to base of nostril, 18;
width below nostrils, 18; width at gape, 23;
tarsus, 138; middle toe and claw, 70; claw, 17.
Bill, brownish black from base to end of nostrils;
then purplish-red, shading to horn-color on both
mandibles. Tarsi and toes, reddish-brown;
the centre of tarsus edged with darker brown,
while those of toes are terminally banded with
blackish; claws, dusky-brown. Shot by
Edgar A. Mearns.
- ✓3721. *Sphyrapicus varius nuchalis*. ♂ ad. Approaches
var. *ruber* in that the red of throat extends
well down into the black chest-band.
221; 400; 130; 84; culmen, 24; gape, 27;
tarsus, 21; middle toe and claw, 24; claw, 9.
- ✓3722. *Sphyrapicus varius nuchalis*. ♂ juv.
219; 401; 130; 80; culmen, 23; gape, 25;
tarsus, 20; middle toe and claw, 23; claw, 8.5.
- ✓3723. *Lophortyx gambeli*. ♂ ad.
290; 366; 112; 109; length of plume, 41.
No. of feathers in plume, 5. Culmen, 10.5; tarsus,
(over)

nostril, 8; gape, 12.5; tarsus, 33; middle toe and claw, 39; claw, 10.

Indian Garden, Oak Creek, A.T. Jan. 17th, 1885.

3724. *Syrtonyx massena*. ♀ ad.

2132; 425; 129; 63; culmen, 14.5; gape, 15; tarsus, 31; middle toe and claw, 36; claw, 14. Irides, bright hazel. Bill, with

maxilla brownish, laterally, and at point; dusky above; lower mandible, pale blue. Tarsi and feet, plumbeous; claws, uniformly horn-color.

3725. *Cyanocitta stelleri macrolopha*. ♀ ad.

342; 465; 150; 144; culmen, 29; bill, measured from nostril, 20; gape, 32; tarsus, 44; middle toe and claw, 32; claw, 9. Irides dark hazel. Bill, black, very slightly tipped with horn-color on maxilla, and for a greater distance on median line of mandible. Tarsi, feet and claws, black.

3726. *Aphelocoma woodhousei*. ♀ ad.

300; 399; 126; 148; culmen, 27; gape, 32; tarsus, 42; middle toe and claw, 32; claw, 9. Irides, hazel. Bill, blue-black, slightly tipped with horn-color. Tarsi, feet and claws, black.

3727. *Aphelocoma woodhousei*. ♀ ad.

295; 392; 124; 140; culmen, 26; gape, 29; tarsus, 38; middle toe and claw, 31; claw, 7.5. Colors of parts the same as No. 3726.

3728. *Sphyrapicus varius nuchalis*. ♂ juv.

218; 343; 126; 84; culmen, 24.5; gape, 26.5; tarsus, 21; middle toe and claw, 23.5; claw, 9.

3729. *Nittion carolinensis*. ♂ ad.

377; 610; 187; 86; culmen, 36; nostril, 30; gape, 43; height of bill at base, 15; width below nostril, 13. Bare tibia, 11; tarsus, 33; middle toe and claw, 41; claw, 5.5. Irides, hazel. Bill, black, with brownish nail on tip of mandibles; mottled below on rami of jaw with yellowish patches. Legs + toes, plumbeous; webs and claws, dusky.

January 22nd, 1885.

Mrs. Means and myself walked a couple of miles up the Verde. Among the birds seen were the following:—

Anthus ludovicianus. American Lark. We watched one running about in shallow water often up to its body. It continually tilts its tail (and its body slightly), and in climbing over the round stones projecting out of the water it would sometimes use its bill to draw itself up. *Sapio pipitica*. One beside the Verde River. *Ardea herodias*. Four were seen together. *Aquila chrysaetos canadensis*. A pair seen.

January 24th, 1885.

Geeryle alcyon. One seen on the Verde.

Mergus serrator.

Mergus mergamus americanus. A fine adult male was seen.

Colaptes auratus americanus. Common.

Fulix marila. Common in large flocks.

Spatula clypeata. One shot: the first seen here.

Mareca americana. Abundant.

Lafila acuta. Several shot. The first seen.

Anas boschas. A flock of Mallards were found just at dark standing upon a little mud island, where I shot several, but only recovered one.

Ardea herodias. Common.

Zenaidura macroura.

Sayornis sayi. A pair about my quarters, and another at the Hospital.

Note. On January 20th a "Cactus Deer" (*Caracus macrotis*) was shot near the Post, and brought to me. The osseous pedicels for the horns were developed, but were entirely grown over by the skin and short hair. It is simply a muley Mule Deer.

No. 165. *Caracus macrotis*. ♂ ad. Jan. 20, 1885. Ft. Verde, A.T. One fore-leg, one hind-leg, skin of head + neck + skull picked out.

January 24th, 1885. Ft. Verde, A. T.
 No. 166. *Tamias harrisi*. ♂ ad. Harris's Chipmunk.
 Total length, 250. Head and body, 153. Tip of nose
 to eye, 18; ear, 32; meatus, 39; tip of ear, 45;
 occiput, 47; end of outstretched hind leg, 242.
 Tail, from root to end of vertebrae, 72. Hair, 97.
 Length of manus, 25; pes, 40. Fore leg, 51.
 Hind leg, 72. Height of ear from crown, 10.
 meatus, 13; breadth, 12. Between eyes, 21.
 Cheek girth, 90. Between claws, across shoulders,
 162. Longest fore-claw, 7; hind claw, 7.
 Longest whiskers, 38. Pouch filled with mezquite seeds.

3732. *Dafila acuta*. ♂ ad.
 695; 930; 272; tail to end middle feathers 185;
 next feather, 135; culmen, 52; nost., 42; gape, 64;
 height at nostrils, 19; width at nost., 18.5;
 tarsus, 46; mte., 68; cl., 11; bare tibia, 17.
 Iris, dark hazel. Bill, with a broad dorsal band
 of black, with sides of maxilla blue, bordered
 with black below for terminal 2/3 and with
 a triangular patch of black at base separating
 the blue are from the feathers, its base
 below; entire mandible, black. Tarsi, feet
 and claws, bluish-gray; webs, darker.

3733. *Spatula clypeata*. ♂ juv.
 505; 800; 248; 97; cul., 71; from nost., 51;
 gape, 78; width at base, 14; opposite
 nostrils, 18; greater width, 32; bare tibia, 16;
 tarsus, 40; mte., 54; cl., 9. Irides, orange.
 Bill blackish, tinged with olive-brown; below,
 the rami of mandible are yellowish, brown, and
 the nail at apex has a subterminal band
 of brownish-red. Tarsi and feet, orange,
 slightly tinged with gray; webs dusky-orange;
 claws dusky-brown.

3734. *Mareca americana*. ♂ ad.
 535; 900; 280; 140; cul., 37; nost., 29; gape 48; width below nostrils, 18;
 height at base of nostrils, 17.5; bare tibia, 13; tars., 40; mte., 54; cl., 9. Iris
 bill with maxilla squarely edged with black at base, forming a narrow black band, which
 is succeeded by an area of pale blue—26 m. m. length, sharply divided by the jet black tip of bill which

sends two lateral horns backward, along lower edge for a
 distance of 10 m. m. The maxilla, in short, is light
 blue sharply banded at base + tip with jet
 black; ^{entire} mandible jet black. Tarsi + toes brownish
 gray; webs + claws black.

3735. *Dafila acuta*. ♀ ad.
 555; 870; 245; 125; cul., 49; nost., 38;
 gape, 59; breadth below nostril, 18; height at base
 of nostrils, 19; bare tibia, 13; tars., 41; mte., 58;
 cl., 10; Iris hazel, bill plumbeous black, with
 nail on lower mandible indistinctly bordered
 with reddish brown sub-terminally. Legs, feet
 webs + claws, bluish gray—the webs +
 claws somewhat darker.

January 27. 1885.

3736. *Nettion carolinensis*. ♀ ad.
 360; 590; 176; 79; cul., 37; nost., 28;
 gape, 42; height of bill opposite base of nostril, 14;
 width below nostrils, 14; bare tibia, 11; tars., 29;
 mte., 43; claw, 8. Iris light brown, bill with
 maxilla blackish mottled with purplish gray,
 mandible with rami of jaws grayish flesh color, becoming
 blackish on distal third, bare tibia, tarsi + toes brownish
 gray, webs + claws dusky.

3737. *Mergus merganser americanus*. ♂ ad.
 660; 950; 273; 132; cul., 56; nost., 36;
 gape, 80; height of bill at base (frontal feathers),
 18; width at gape, 20; bare tibia, 12; tars., 49;
 mte., 76; cl., 9. Bill with a broad dorsal stripe
 of black, laterally bright red ^{rami of} mandible below
 bright red at base mottled with black patches
 which become confluent—the mandible being jet
 black at tip. Tarsi, toes and webs of feet,
 both surfaces, uniformly bright orange red,
 claws horn color shaded with dusky plumbeous.

Dendroica audubonii. - Abundant near water.

Tringoides macularius. A few have remained
 all winter. One seen to-day.

Ardea herodias. Common. A few seen to be migrating.

January 28, 1885. Ft. Verde, A.T.

3738. *Melospiza fasciata montana*. ♂ ad.

167: 231: 74: 78: cul., 12: gape, 12: tars., 23.5: mte., 21.5: cl., 5. Iris hazel, bill blackish above and on tip of mandible, laterally and below fleshy plumbeous, tarsi, feet and claws brown.

3739. *Regulus calendula*. ♂ ad. 11.5
110: 179: 59: 47: ^{not} cul., 5: gape, 12: tars., 19: mte., 13: claw, 4.

Geothlypis trichas. Abundant all over the Verde bottom, preferring mesquite thickets and the vicinity of Steadys - Verde River & its tributaries Beaver Creek and Clear Creek. *Merula migratoria propinqua*. - The first was heard to-day.

Sialia arctica. On January 22nd I saw the first (a single one) Arctic Bluebird here in the Valley that I have seen this winter. *Sialia mexicana*. - A few along Beaver Creek.

They were feeding in small flocks upon some seeds that grow upon tall, rank weeds. *Salpinctes obsoletus*. One upon our wood-pile. *Catherpes mexicanus conspersus*. - On cliffs along Beaver Creek.

Regulus calendula. - The species has been abundant here all winter. The specimen above recorded (No. 3739) had so exactly the appearance of a flycatcher that I shot it, although its wing bands and small size caused me to suspect that it was an *Empidonax*. It sat upon dry twigs over the water and called out in dralls after insects.

Aythya ludoviciana. Common along streams. *Dendroica auduboni*. Abundant on Beaver Creek.

Myiadestes townsendi. One on mesquites in the Verde bottom.

Corpodacus frontalis. Abundant; singing about

the Hospital early in the mornings. On Beaver Creek they flew in large flocks. *Melospiza fasciata*. Common

enough in suitable places along Beaver Creek and the Verde River. *Zonotrichia gambeli intermedia*. - Abundant and singing. *Leucophris* has not been seen lately. I doubt that it spends the winter here; but it occurs in spring and fall.

Eremophila alpestris. - A few flocks. *Sturnella neglecta*. - One flock near the Post. *Scolecophagus cyanocephalus*. Its numbers are increasing. I saw a few Blackbirds on Beaver Creek which I think were *Agelaius phoeniceus*, but am not positive. *Corvus corax*. A few. Scarce, but seen nearly every day.

Pipilo aberti. Abundant. Its loud alarm note is now heard nearly every day. Earlier in the winter it was rarely uttered.

Sayornis sayi. Abundant. I think they are beginning to arrive from the south. *Sayornis nigricans*. A few along the stream. *Picus scalaris*. A few.

Picus villosus harrisi. - One heard.

Colaptes auratus mexicanus. - Common.

Tinnunculus sparverius.

Accipiter fuscus.

Accipiter cooperi.

Buteo borealis calurus.

Ardea herodias.

Tringoides macularius. } Several of each.

Oxyechus vociferus

Anas boschas. Large flocks.

Aythya ferina americana. - One flock.

Nettion carolinensis. - Flocks

Mareca americana. - Flocks. Abundant.

Anser Benicla Canadensis. - A number seen along the Verde. variety not determined.

January 29th 1885. Ft. Verde.
 ✓ 3740. Picus scalaris. ♂ ad. Shot in front of our quarters.
 198; 542; 106; 71; culmen, 24; gape, 26;
 tarsus, 19; mte., 21; cl., 9. Irides, dark red.
 Bill, plumbeous; darkest above. Tarsi and feet,
 plumbeous; claws, dusky-plumbeous.

Note. - Lophortyx gambeli. I have collated
 and tabulated the measurements of Gambel's
 quail up to date. The specimens tabulated were
 20 ♂ ad. ad., 10 ♀ ad. ad., and 6 juv.; total, 36.
 Besides those tabulated as above, there were a
 number of spp. collected without measurement,
 as follows. 2649, 2650, 2651, 2665, 2686, 2756,
 2786, 2787, 3138, 3139, 3140, 3151, 3152, 3189,
 3190, 3191, 3282, 3283, 3307, 3502, 3503.
 Total number collected, 57.

January 30th 1885
 ✓ 3742 Carpodacus frontalis ♀ ad.
 152; 252; 80; 66; cul., 11; gape, 11.5; tars., 19;
 mte., 18; cl., 5. [No. 3741 is catalogued on page, 279.]

February 3rd 1885. Ft. Verde, A. T.
 Dr. Leclendenin and I went on a Deer hunt
 up on the mesa east of the Post. We each
 took a "long Tom" or Infantry rifle. We crossed
 the Verde and rode up the wood road onto the
 top of the mesa, then skirted the cañons running
 towards Beaver Creek, and turned gradually
 towards the foothills of the Mogollons. We found
 Deer tracks among the cedars in the foothills.
 Then we followed up a deep cañon for a few
 miles, and found a Red-tailed Hawk's nest on a
 cliff, which we visited, but could find no Deer
 or Bear signs. Returning home we followed a
 cañon to Clear Creek east of Whigfield's ranch,
 in which we found Long-eared Owls, Robins
 and one fine buck of the Mule Deer
 which we both missed several shots at.
 The following named species of Birds and

Mammals were seen on the mesa, the
 fauna of which differs in some respects from
 that of the Verde Valley: -

Mammals. -

Tamias striatus dorsalis. Gila chipmunk.

Several were seen in rocky cañons filled
 with crevices and holes.

Spermophilus grammurus. Rocky Mountain

Line-tailed Squirrel. At least a dozen were
 seen in different places. Most of them were

in Rocky cañons. Lepus sylvaticus were seen flying this evening. the 18th this winter.

Neotoma

Their piles of sticks and cow-dung were abundant.

Lepus sylvaticus arizonae. Desert Hare. A few.

Lepus callosus texianus. Northern Jackass Hare.
 Abundant everywhere.

Canis macrotis. Mule Deer. Tracks were

seen in several places, but only one was
 seen. We were just coming out into the valley

of Clear Creek, from the narrow and deep cañon
 through which we had travelled for several

miles, when the Doctor exclaimed: "See that
 Deer - a big buck!" We slipped off our

horses and I waited for the Doctor to fire.
 He said: "You count three!" I counted and we

both fired at the buck, as he stood brownish
 about 100 yards away. He sprang forward and

held his head roughly up and then made
 some prodigious bounds over the gulches

in the side of the cañon, and then stopped
 in a patch of greasewood about 125 yards

from us. I fired again, and so did the
 Doctor, but, although our rifles were down

to the 100 yard range, every shot appeared to strike
 just over the Deer. He then ran up the steep slope

and stopped again at 300 yards, and we fired
 again. The Doctor had raised his sights and fired

over, but my shot probably fell a little under
 him. Then he pranced up onto the brow of

February 3rd - Continued.

the hill, and stood in relief against the sky. He was a splendid specimen, with large horns. As he disappeared over the brow of the hill, we mutually congratulated each other upon our superb marksmanship, and rode home.

Birds: -

Merula migratoria propinqua. - A large flock in a narrow canon near Leas Crak.

Sialia arctica. - In large flocks about some water tanks on the mesa.

Myiadestes townsendi. A few of these birds were seen where there were cedars.

Regulus calendula.

Salpinctes obsoletus.

Catherpes mexicanus conspersus.

Lophophanes inornatus. Common in cedars.

Dendroica auduboni.

Lanius ludovicianus excubitorides.

Carpodacus frontalis.

Zonotrichia leucophrys intermedia.

Junco (whether oregonus or cinereus) I do not know. I am unable to distinguish between the two when alive, and now were shot.

Pipilo maculatus megalonyx. In the foothills.

Pipilo aberti. Seen on top of the mesa.

Corvus corax.

Phelobona woodhousei. - On the foothills.

Sturnella neglecta. Common.

Picus scalaris. Common enough every where.

Colaptes auratus mexicanus. - Common.

Esalon columbarius. One fine adult was seen in the cedars of the foothills.

Linumulus sparverius. Common.

Buteo borealis calurus. A pair were sitting on some cedars on a high cliff in the foothills. Dr. Cleudon fired a few rifle shots at them, and started them from the trees. One of them was afterwards seen

to alight upon a large nest ^{built on a ledge} near the top of the cliff. We ~~walked~~ climbed up the steep rocky slope, and I attempted to climb up to the nest, but a mass of loose rock which I grasped for support gave way and rolled to the foot of the cliff, nearly carrying me with it. I then descended with much difficulty, and went around to the top, and looked down into the nest which was very bulky, built of cedar sticks and roughly lined with lark and ^{pinon} turps & bran pellets. Although completed apparently, no eggs had been deposited.

Asio americanus. I shot and wounded a Long eared Owl in a cedar tree in a narrow, high box canyon of white rock.

February 5th 1885. Fort Verde, A. T.

3743. Agelaius phoeniceus ♂ ad.

250:408:134:110: cul, 23: gape, 22: tars., 30: Mte., 31: cl., 8.5.

3744. Agelaius phoeniceus ♂ juv.

234:393:125:95: cul, 22.5: gape, 22.5: tars., 32: Mte., 31: cl., 9.

3745. Agelaius phoeniceus ♀ ad.

201:332:108:81: cul, 18: gape, 18.5: tars., 25: Mte., 26: cl., 8.5.

3746. Agelaius phoeniceus ♀ ad.

204:337:108:83: cul, 19: gape, 19: tars., 26: Mte., 27: cl., 9.

3747. Agelaius phoeniceus ♀ ad.

212:342:112:90: cul, 20.5: gape, 21: tars., 27.5: Mte., 27: cl., 8.5.

✓ 3748. Rearporthynchus crissalis ♂ ad.

290:315:97:137: cul, 36: Mte., 30: gape, 42: tars., 34: Mte., 30: cl., 8.

✓ 3749. Calamospiza melanocorys See Aux Vol. II Page 49.

Lark Bunting. ♂ ad. 175:305:92:78: cul, 15: gape, 15: tars., 27: Mte., 25: cl., 6.5.

✓ 3750. Calamospiza melanocorys ♂ ad.

175:292:90:76: cul, 14: gape, 15: tarsus. 26: middle toe and claw, 23: claw alone, 7.

- ✓3751. *Calamospiza melanocorys* ♀ ad.
170; 270; 82; 68; cul., 14.5; gape, 15.5;
tarsus, 25; mte., 22; cl., 5.5.
- ✓3752. *Calamospiza melanocorys* ♂ ad.
180; 282; 92; 73; cul., 15.5; gape, 16;
tarsus, 25; mte., 23; claw, 6.
3753. *Fulica collaris* ♀ ad.
418; 675; 184; 67; cul., 47; nost., 30; gape, 50;
height of bill at base of culmen, 20; width below
nostrils, 21; bare tibia, 10; tars., 34; mte., 60; cl., 8.
Irides yellow.
3754. *Fulica marila* ♂ juv.
435; 735; 198; 70; cul., 43; nost., 28;
gape, 50; height of bill at base of cul., 20; width
below nostrils, 20; bare tibia 11; tars., 38;
mte., 65; cl., 8. Irides yellow.

February 9th 1885. Ft. Verde, A.T.

- ✓3755. *Bubo virginianus subarcticus* ♂ ad.
480; 1275; 365; 210; cere + cul., 40; cere, 21
culmen, 24; gape, 45; tarsus, 59; middle
toe and claw 66; claw, 26. Stomach contained
portions of Cottontail.

- ✓3756. *Timminculus sparverius* ♀ ad.
267; 588; 200; 138; culmen and cere, 15;
cere, 4; culmen, 13; gape, 18;
tarsus, 36; mte., 33; cl., 10.

3757. *Lophodytes cucullatus* ♀ ad.
435; 610; 177; 100; cul., 36; nost., 26; gape, 48;
height of bill at base of cul., 12; width below
nostrils, 8; bare tibia, 8; tars., 29; mte., 54; cl., 7.

- ✓3758. *Timminculus sparverius* ♂ ad.
272; 575; 194; 135; cere, 4; cul., 12;
gape, 16; tars., 35; mte., 31; cl., 10.

3759. *Fulica americana* ♂ ad. Whipple Barracks, Prescott, A.T. February 8th, 1885.
Length to end of toes, 555; length, 410; 700;
200; 63; cul. measured from base of frontal
plate, 46; frontal plate, 12; cul. from
frontal plate, 35; gape, 36; bare tibia, 19;
mte. tars., 60; mte., 89; cl., 14. Irides bright
red, bill very flesh color (frontal plate dark
brownish red); tipped with greenish blue, with a
slight mark of same above each nostril and
marked above & below with subterminal band of dark
red. Legs & feet greenish plumbeous, the tibiae
banded externally with very pale orange red,
Claws, plumbeous black.

3760. *Anas boschas* ♂ ad. Ft. Verde, A.T. Feb. 10th, 1885.
Weight 2 lbs. 15 oz. 627; 1005; 303; 112. cul. fr. f. 58; ext. base, 69;
nost. 47; gape, 70; height at ext. base 26; width at base 23; greatest width 25.5;
of bill to cul. sup. 92; occip., 129; cul. at f. f. to occip., 65; head to base of cul., 208; tib. 100;
bare portion, 15; tarsus 49; mte. 66; cl. 8.5; hte. 21; cl. b. 2. diam. eye 9.2.

February 11th, 1885. Ft. Verde, A.T.

3761. *Fulica americana* ♂ ad. Not Skinned

Letter relating to my specimen (No. 159) of
Carriacus leucurus. White-tailed Deer.

"Whipple Barracks, Dec. 23, 1884.

"Dr. Means

"Dear Sir,

"This is the pelt of which, Genl.
Crook telegraphed to you, but in a rather
dilapidated condition. You will have to do some
crazy patchwork if you desire to mount it.
The antler was broken off and lost by the
packers, but was fac. simile of the other.
It was killed near the base of the Bill Williams
Mountain on the 5th of December, 1884.

Yours truly

Chas. H. Allabach."

February 17th, 1885 Ft. Verde, A.T.

- ✓3762. *Agelaius phoeniceus sonoriensis* ♀ ad.
212: 350: 112: 90: cul., 20: gape, 20: tars., 27:
Mte., 28: claw 8.5.
- ✓3763. *Agelaius phoeniceus sonoriensis* ♀ ad.
198: 327: 108: 87.5: cul., 18: gape, 19: tars., 27:
Mte., 26: claw, 8.
- ✓3764. *Agelaius phoeniceus*. ♂ ad.
202: 336: 105: 84: cul. 20: gape, 20:
tarsus, 26: mte., 27: cl., 8.
- ✓3765. *Scolecophagus cyanocephalus*. ♀ ad.
242: 382: 124: 101: cul., 21: gape, 24:
tars., 32: mte., 27: claw, 8. Irides, hazel.
- ✓3766. *Scolecophagus cyanocephalus*. ♂ ad.
(Not skinned). 255: 400: 132: 106: cul., 21.5: gape, 24:
tars., 35: mte., 31: cl., 9. Irides, yellow.
- ✓3767. *Harporhynchus crissalis*. ♂ ad.
315: 332: 108: 152: cul., 39: most., 31: gape, 41:
tars., 33: Mte., 31: cl., 7.
- ✓3768. *Sialia arctica*. ♀ ad.
177: 330: 109: 71: most., 10: gape, 22: tars., 23:
Mte., 21: claw, 6.
- ✓3769. *Amphispiza belli nevadensis*. ♂ ad. ad.
163: 262: 84: 76: cul., 12: gape, 12: tars., 23:
Mte., 19: claw, 5.
- ✓3770. *Amphispiza belli nevadensis*. ♂ ad.
166: 246: 82: 77: cul., 11.5: gape, 13: tars., 22:
Mte., 19: claw 5.
- ✓3771. *Amphispiza belli nevadensis* ♂ ad.
168: 258: 81: 77: cul., 12: gape, 12.5: tars., 23:
Mte., 20: claw, 5.
766. *Fulica americana*. ♂ ad.
Length to end of toes, 575: 410: 735:
2/5: 63: cul., 48: frontal plate 11: cul. fr
frontal plate, 39: gape, 36: bare tib 28:
tarsus 62: mte 9/5: cl., 15.

February 19th, 1885. Ft. Verde, A.T.

- ✓3761. *Zonotrichia scalaris*. ♂ ad.
192: 343: 108: 73: cul. 24: gape 28:
tars. 19: Mte. 20: claw 8.
- ✓3772. *Zonotrichia scalaris*. ♂ ad.
191: 336: 105: 73: cul. 25: gape 28: tars. 20:
Mte. 22: claw 9
- ✓3773. *Zonotrichia scalaris* ♀ ad.
183: 330: 105: 70: cul. 21: gape 23: tars. 19:
Mte. 20: claw 9.
- ✓3774. *Thryomanes bewickii leucogaster* ♀ ad.
137: 176: 56: 57: most. 11: gape 19: tars 18:
Mte. 16: claw 5
- ✓3775. *Tinnunculus sparverius* ♂ ad.
262: 555: 182: 131: cul. cerv 5: cerv 4:
cul. 12: gape 17: tars. 37: Mte 35: claw 11
- Among the birds seen were the following.
Lophophanes inornatus. One pair on Beaver Creek,
near the Cliff Dwellings.
Regulus calendula. Abundant. Not yet singing.
Harporhynchus crissalis. In full song.
Pipilo aberti. The loud alarm note is now more
often heard, and also a curious, short song,
if so it may be called.
Melospiza fasciata fallax. In full spring song.
The song had a strange similarity to the Eastern
melodia, but is yet quite different.
Junco. Quite numerous, but not specifically identified.
Peromophila alpestris leucoloma. A large
flock of this variety about the corals, but
exceedingly restless and shy.
Arremon ludovicianus. Not scarce along streams,
but usually single or in pairs.
Oxyechus vociferus. Quite numerous, as it has been
all winter.
Troglodytes macularius. A few of these birds
are still here, and have been present all winter.
Ardea herodias. Has been here in some
numbers all winter and is still plentiful.

(February, 19th - Continued.)

Vicus scariaris. - One female shot had the feathers along flanks worn to mere stubs, as if from frequently passing in and out of a hole in a tree. Can they already be molting?

Colaptes auratus mexicanus. Abundant, as it has been all winter in cottonwoods along the Verde, and especially along Beaver Creek; but it is generally dispersed.

Dryocopus bewicki leucogaster. - Has been present and tolerably common throughout the winter.

Accipiter fuscus. } Rather abundant all winter.
Accipiter cooperi }

Buteo borealis calurus. - Several seen. One with dark lower surface, a form which is scarce here.
Ceryle alcyon. - Several seen. It has been quite common all winter.

February 21st, 1885. Fort Verde, Arizona

13776. *Anthus ludovicianus*. ♂ ad.

172; 282; 87; 70; cul. 12; nost. 9; gape, 17; tarsus, 22.5; mte., 20; cl., 5. hind cl., 8.5.

13777. *Junco hyemalis shufeldtii* ♂ ad.

162; 252; 81; 76; culum, 11.5; gape, 11.5; tarsus, 22; mte., 20; cl., 5.

13778. *Ceryle alcyon*. ♂ ad. Moulting, but quills perfect.

333; 562; 264; 98; cul., 58; nost., 45; gape, 71; height of bill at base, 15; width at base of bill, 21; tars., 11.5; mte., 23; cl., 9; bare tibia, 9.5.

Cathartes aura. - A large flock of Buzzards at the butcher shop.

February 25th, 1885. Ft. Verde A.T.

13779. *Melospiza fasciata fallax* ^{montana group} Mountain Long Sparrow. ♂ ad.

164; 225; 72; 76; cul., 12; gape, 13; tars., 22.5; mte., 21; cl., 5. Irides, hazel. Bill with maxilla dusky plumbeous, mandible flesh color at base, shading through bluish to the dusky tip. Tarsi, brownish flesh color, feet more brownish and darker, claws brown.

13780. *Melospiza fasciata fallax* var. novo. Gila Song Sparrow. ♂ ad.
163; 216; 67; 75; cul., 12.5; gape, 13.5; tars., 22; mte., 20.5; cl., 5.3. Irides, hazel. Bill, feet and claws, like No. 3779.

These specimens may be taken as types of two distinct geographical races of *Melospiza fasciata fallax*. No. 3779 is typical of that variety, while No. 3780 may be taken as the type of a new race, which has hitherto never been characterized, inhabiting the Gila Basin. It is the only species found in this locality during the summer, and inhabits exclusively the vicinity of streams, where it breeds sparingly. Specimens shot at Fort Mojave did not differ from those found here, and doubtless elsewhere throughout the Gila Basin. The measurements of a specimen shot at Ft. Mojave in May 1884, are given on page of Journal.

13781. *Agelaius phoeniceus* ♀ ad.

198; 329; 104; 78; cul., 20; gape, 20; tars., 26.5; mte., 26; claw, 8. Iris, hazel, Bill dusky plumbeous above, pale plumbeous below. Tarsi, brownish black, feet and claws black. Feathers of shoulder edged with red. This may be a sign of maturity. The following four specimens lack any decided tinge of red on the shoulders and have the throat paler.

13782. *Agelaius phoeniceus* ♀ ad. *sonoriensis*

191; 331; 106; 80; cul., 19.5; gape, 19; tars., 26; mte., 27; cl., 8. Colors same as 3781.

13783. *Agelaius phoeniceus* ♀ ad. *sonoriensis*

198; 339; 106; 83; cul., 18; gape, 18; tars., 27; mte., 26; claw 8.5. Colors of parts same as 3781.

13784. *Agelaius phoeniceus* ♀ ad.

195; 330; 108; 81; cul., 18; gape, 17.5; tars., 26; mte., 25; claw, 7. Colors same as 3781.

13785. *Agelaius phoeniceus* ♀ ad. *sonoriensis*

206; 349; 116; 90; cul., 19.5; gape, 19; tars., 26.5; mte., 27; cl., 8.5. Colors of parts same as 3781.

- ✓ 3786. *Sayornis sayi* ♀ ad.
192: 310: 102: 85: bill from nostril, 12: gape, 23.5: breadth below nostril, 6: tars., 20: Mtc., 17: cl., 5.5.
Irides, hazel. Bill black, brownish at base of mandible, tarsi, feet and claws, black.
- ✓ 3787. *Sayornis sayi* ♂ ad.
193: 321: 106: 88: bill from nostril, 11.5: gape, 22: breadth opposite nostril, 6.2: tars., 20.5: Mtc., 17: cl., 6.
Colors of parts same as 3786.
- ✓ 3788. *Picus scalaris* ♀ ad.
186: 333: 105: 72: cul., ^{21.5} ~~21~~: gape, 22.5: tars., 18: Mtc., 20: claw, 8.
- ✓ 3789. *Picus scalaris* ♂ ad.
191: 339: 107: ~~71~~ ⁷¹: cul., 23.5: gape, 26: tars., 20: Mtc., 21: claw, 8.5.
- ✓ 3790. *Picus scalaris* ♂ ad.
191: 344: 108: 68: cul., 25: gape, 27: tars., ^{20.5} ~~20~~: Mtc., 20.5: claw, 8.5.
- ✓ 3791. *Picus scalaris* ♂ ad.
191: 339: 107: 72: cul., 24: gape, 26: tars., 19: Mtc., 20.5: claw, 8.5.
- ✓ 3792. *Picus scalaris*
188: 342: 107: 69: cul., 24.5: gape, 26: tars., 20: Mtc., ^{20.5} ~~20~~: claw 8.2.
- 2 In all of the above five specimens the colors of parts are as follows; Irides, red. Bill dusky plumbeous, tarsi & feet greenish plumbeous; claws dusky.
- ✓ 3793. *Colaptes auratus mexicanus* ♀ ad.
333: 540: 170: 130: cul., 38: gape, 41: height at base, 5.5: tars., 30: Mtc., 33: cl., 12. Irides, dark red. Bill, plumbeous black, tarsi and feet greenish plumbeous, claws, dusky plumbeous.
- ✓ 3794. *Oxyechus vociferus* ♀ ad.
260: 530: 168: 103: length to end of toes, 270: cul., 21: gape, 23: bare tibia, 20: tars., 39: Mtc., 27: claw, 6.
- ✓ 3795. *Oxyechus vociferus* ♂ ad.
256: ~~258~~ ²⁵⁸: 168: 107: length to end of toes, 250: cul., 20.5: gape, 23: bare tibia, 18.5: tars., 33: Mtc., 25: claw, 6.

- ✓ 3796. *Oxyechus vociferus* ♀ ad.
266: 535: 178: 113: length to end of toes, 255: cul., 22: gape, 24: bare tibia, 19: tars., 36: Mtc., 25: cl., 6.
- ✓ 3797. *Oxyechus vociferus* ♂ ad.
250: 510: 167: 101: length to end of toes, 254: cul., 22: gape, 23: bare tibia, 19: tars., 37: Mtc., 26: cl., 4.5.

February 27th 1885. Ft Verde, A.T.
Fringoides macularius. — One beside the Verde was still in winter dress, unspotted beneath.

March 1st 1885 —

3798. *Sayornis sayi* ♀ ad.
195: 325: 104: 88: bill from nostril, 11.5: gape, 22.5: breadth of bill below nostril, 6.5: tars., 20: Mtc., 17.5: cl., 6.

March 2nd 1885

- Copper Cañon near Ft. Verde, A.T.
3799. *Peucaea ruficeps* ^{bougardi} ♂ ad.
160: 215: 66: 75: cul., 13: width of bill at forehead, 6: gape, 14: tars., 21: Mtc., 19: cl., 5.
Irides hazel. Bill, dusky plumbeous above, mandible pale plumbeous, shading to dusky at tip. Tarsi flesh color, feet brownish flesh color, claws brown.
This is typical *ruficeps*.

3800. *Dialia mexicana* ♂ ad. Copper Cañon, 5 m. W. of Ft. Verde.
178: 333: 112: 74: most, 7: gape, 19.5: tars., 20: Mtc., 19.5: cl., 6. Irides, dark brown. Bill, brownish-black (nearly pure black) ^{narrowly} edged with yellow laterally at base. Tarsi ^{feet} and claws, brownish-black; "soles" of feet, yellowish.

3801. *Myiadestes townsendi* ♀ ad. Copper Cañon.
216: 340: 114: 105: most l., 7: gape, 19: tarsus, 21: Mtc., 20.5: cl., 6.5. Irides - very dark brown. Bill, black. Tarsi, feet and claws, brownish black. ^(soles of feet, yellowish)
3802. *Myiadestes townsendi* ♂ ad. Copper Cañon.
220: 350: 118: 108: most l., 7.5: gape, 19: tarsus, 22: Mtc., 22: cl. 6.5. Colors of parts as above.

3803

March 2nd, 1885 Ft. Verde, A.T.
Dubo virginianus subarcticus ♂ ad.
 510:1255:355:205: cul + cere, 40: cere, 21:
 cul., 24: gape, 42: ~~mtc~~ tars., 61: mtc, 65: cl., 25.
 hind claw, 21: inner claw, 27: outer claw, 22. Shot in a
 cottonwood tree beside the Verde River. Stomach,

Letter from General George Crook relative
 to two skulls of *Mustelidae* in my collection.
 "Prescott. March 1st 1885.

"My dear Doctor

"I enclose two skunk-heads
 which I got yesterday. The larger one be-
 longed to a female skunk of the ordinary
 kind; the smaller one was a male and of
 a different species. It was not more than
 half the size of the other, though it apparently
 had reached maturity. Its back had small
 longitudinal black and white stripes with
 comparatively short and rather bushy tail.

I had previously killed a male skunk
 and a wild cat, but was unable to find
 their skeletons after receiving your letter."

"Yours sincerely
 (Signed) "George Crook"

March 4th 1885, Ft. Verde, Ariz.
 3804 *Tamias l. eximius* ♀ ad.

280:610:202:138: cul + cere, 15: cere, 4:
 cul., 12.5: gape, 17: tars., 37: mtc., 33: cl., 10.

3805 *Colaptes auratus mexicanus*, ♀ ad.

329:536:120:39: gape, 43: cul., 39: tars., 31:
 mtc., 34: claw, 12.

3806 *Melospiza lincolni* ♂ ad.

March 5th 1885: Ft. Verde, Ariz.
 147:212:68:69: cul., 11: gape, 11: tars., 20.5:
 mtc., 19: d., 5. Irides hazel, culmen ~~blackish~~
 mandible flesh color at base becoming dusky towards
 tip. Tarsi, feet + claws, brownish flesh color.

March 5th continued

3807 *Agelaius phoeniceus* ♀ ad.

211:342:109:83: cul., 19: gape, 20: tars., 29:
 mtc., 28: claw, 8.5.

3808 *Agelaius phoeniceus* ♀ ad.

208:335:105:85: cul., 20: gape, 20: tars., 27:
 mtc., 26: claw, 8.

3809 *Oxyechus vociferus* ♂ ad.

250:497:160:103: cul., 20.5: gape, 24: bare
 tibia, 20: tars., 34: mtc., 25: cl., 4.5.

March 6th 1885 Ft. Verde, A.T.

No. 167 *Cariacus macrotis* Say. Mule Deer. ♀ ad.

Head (skinnd skull of), one fore and one hind
 foot preserved. Weight when dressed with
 skin, head and feet cut off, 70 lbs.

From tip of nose to eye, 173; ear, 260; tip of ear, 500;
 occiput, 320; from inner canthus to inner ear
 opening, 11; lachrymal opening, 21. Distance
 of ear above crown, 230. Distance between
 eyes, 106. Girth behind ears, 340.

Breadth of ear, 120: Girth of head midway between
 eyes and base of ears, 420: from tip of nose to
 angle of mouth, 86.

March 7th, 1885. Ft. Verde, A.T.

3810 *Gallinago media wilsoni* ♂ ad.

273:440:139:65: cul., 64: gape, 63:
 bare tibia, 16: tars., 31: mtc., 35: claw, 6.5:
 length to end of toes, 318:

3811 *Oxyechus vociferus* ♀ ad.

261:518:172:106: cul., 19.5: gape, 23.5:
 bare tibia, 19: tars., 36: mtc., 26: cl., 5: length to
 end of toes, 262.

3812 *Oxyechus vociferus* ♂ ad. (Not skinned.)

3811a 255:504:168:50: cul., 20.5: gape, 23: bare
 tibia, 18: tars., 39: mtc., 28: claw, 5: length to
 end of toes, 263.

3813. *Oxyechus vociferus* ♂ ad.
 256:510:167:104: cul., 20: gape, 23:
 bare tibia, 17.5: tars., 37: Mtc., 28: claw, 7:
 length to end of toes, 263. ~~ad.~~
- 3814 *Eremophila alpestris adusta* (fil. Dings) ♂ ad.
 177:326:105:74: cul., 13.5: nost., 10: gape, 17:
 ear tufts, 15: tars., 22: Mtc., 17.5: claw, 6: hind
 claw, 9. Irides, bright hazel; bill, dusky plum-
 beous above + on tip of mandible, basal
 two thirds of mandible, pale blue. Tarsi, feet
 and claws, uniform plumbeous black.
3815. *Anthus ludovicianus* ♂ ad., moulting.
 166:276:88:67: cul., 12: nost., 9: gape, 17:
 tars., 23: Mtc., 18: claw, 4: hind claw, 8.
3816. *Lanius ludovicianus excubitorides* ♀ ad.
 234:327:103:109: cul., 17: nost., 12.5:
 gape, 25: tars., 27: Mtc., 25: claw, 7.
3816. *Nettion carolinensis* ♀ ad.
 379:607:180:82: cul., 36: nost., 28: gape, 42:
 height of bill at frontal feathers, 13: breadth below nos-
 trils, 14: bare tibia, 12: tars., 29: Mtc., 40: cl., 7.

March 14th, 1885. Ft. Verde, A. T.

Calamospiza melanocorys. - In large
 flocks of several hundred each. They are
 now singing a peculiar song as they sit on
 the top of a bush, whence they frequently fly
 up in the air and return to the same perch
 like a flycatcher. Their call-note is very
 pleasing. They have not yet moulted.

Agelaius phoeniceus. - Several large flocks,
 varying in size from fifty to several hundred
 individuals, circulate in the vicinity of the
 Post. These flocks are usually present along
 the border of the Verde River, or else about
 the corrals and haystacks in the Post. The
 sexes usually fly in separate flocks, and
 the females are much more abundant
 than males. In a flock of perhaps one

hundred birds, not one male have I ever
 seen although I see the flock every time
 I go hunting.

Geococcyx cyanocephalus. - Still very
 abundant about the Post. When I came here on
 March 25th last, the first sight that presented
 on arriving was a parade-ground covered
 with Brewer's Blackbirds, while their notes
 filled the air. During the past winter they did
 not alight upon the parade ground; but about
 the first of March they began to resort there
 early each morning again. They spend the
 hottest part of the day, in the shade upon
 the ground beneath a mesquite bush. They
 like to roost upon roofs of buildings.

Melospiza lincolni. - Several were seen
 in piles of debris and the roots of up-
 overturned trees on the margin of the Verde,
 but they were shy, and I only captured one spec.
 Its note is quite loud, and unique.

Astragalinus psaltria. - None have been seen
 during the past winter; but to-day a small
 flock was found among the cottonwoods beside
 the River. I shot three; but their crops were
 so distended with worms which they had
 gleaned from the cottonwoods that they broke
 open when they fell to the ground, and in
 each a globular mass of bright yellow
 worms about 10 mm in length and exactly
 of the color of the Goldfinches' breast was found.

Carpodacus frontalis. - Singing a loud
 and very remarkably fine song. When
 flying ^{in flocks} overhead they were in full song,
 and they also sang from the cottonwood
 tops, or flew up in the air and descended
 singing. Were feeding upon the yellow worms described
 in the above. - Quite numerous along the Verde.
Sialia audubonii. - Common in the trees
 along the streams.

March 14th Continued.

- 3817 *Melospiza lincolni* ♂ ad.
139: 205: 63: 63: cul., 11.5: gape, 12: tars., 21:
Mte., 19: cl., 4.5: hind claw, 6.5. Iris hazel.
angle of mouth and base of mandible, yellowish.
vestibule of mandible, flesh color, with pale bluish
lateral bands. Maxilla, dark brown. Tarsi, brownish
flesh color, feet a shade darker.
- 3818 *Junco hyemalis shufeldti* ♀ ad.
148: 225: 75: 68: cul., 11.5: gape, 12.5: tars., 19:
Mte., 19: cl., 5.5.
- 3819 *Carpodacus frontalis* ♂ ad.
154: 240: 80: 70: cul., 11: gape, 11.5: height of
bill at base, 8: length, 7.5: tars., 17: Mte., 18.5: cl., 5.
- 3820 *Carpodacus frontalis* ♂ juv. Immature, but full grown.
with forehead throat and rump, pale rose color mixed
with yellow. Bill, tarsi and feet less dark in color than
above. 151: 246: 80: 66: cul., 11: gape, 11:
tars., 18: Mte., 18.5: claw, 4.5.
- 3821 *Ceryle alcyon* ♂ ad.
338: 588: 166: 104: cul., 57: gape, 73: height of
bill in front of nostril, 13: at base of cul., 16: width at
gape, 22: bare tibia, 11: tars., 12: Mte., 23: cl., 9.
- 3822 *Buteo borealis calurus* ♀ ad.
570: 1385: 438: 235: Cul + Crev, 40: Crev, 18
cul., 28. Gape, 47: tars., 80: Mte., 64: Cl., 23: HCl. 31
Inner claw 28: outer cl 18: Irides hazel. Crev yellowish
green. Bill plumbeous at base shading to blue black
at tip. Claws plumbeous black. Tarsi & feet
lumin yellow.

March 17th, 1884. Fort Verde, Arizona.

- 3823 *Melospiza fasciata fallax* ♂ ad.
162: 225: 70: 78: cul., 12: gape, 13: tars., 24: Mte., 20.5:
claw, 5.5. Stomach empty.
- 3824 *Melospiza fasciata fallax* ♂ ad.
163: 222: 70: 77: cul., 12: gape, 12.5: tars., 22: Mte., 21:
claw, 5.5.

- 3825 *Melospiza fasciata fallax* ♀ ad.
153: 205: 67: 71: cul., 12: gape, 12.5: tars., 22:
Mte., 20: claw, 5.
- 3826 *Regulus calendula* ♂ ad.
113: 182: 61: 47: ~~cul.~~, most., 6: gape, 11: tars., 18.5:
Mte., 13.5: claw, 3.7.
- 3827 *Zenaidura macroura* ♀ ad.
353: 463: 157: 150: cul., 15: gape, 20: tars., 22: Mte., 25:
claw, 4.5.
- Trocephalus rubinus mexicanus*. - First seen.

March 18th, Ft. Verde, A.T.

- 3828 *Amphispiza bilineata* ♂ ad. All first seen!
142: 210: 69: 68: cul., 11.5: gape, 12: tars., 19:
Mte., 16.5: ~~claw~~, 4.5.
- 3829 *Fulica americana* ♀ ad.
Length to end of claws, 520: 380: 655: 195: 60:
cul., 45: gape 31: bare tibia, 23: tars., 59:
Mte., 84: claw, 11.5.
- Xanthocephalus icterocephalus*. - Several were seen
to-day about the corral, which were the first seen.

March 19th, 1885. Ft. Verde, Arizona.

~~Thalassidroma~~ *Tachycineta thalassina*. - Quite a
number of Swallows were seen to-day for
the first. Those that I saw near enough to iden-
tify were of this species.

March 20th, 1885. Ft. Verde, Arizona.

Harpodichthys crissalis. - Their number
considerably decreased about the beginning
of March.

Astragalinus psaltria. Now abundant & singing
in the cottonwoods associating with House Finches.
Dendroica auduboni. - One seen to-day.
Arremonops vociferus. Returning home from
up the Verde, these birds were having a
great concert and were flying about
high in the air in flocks and those along

the sand flats were crying sharply at us. When flying in flocks overhead I have often heard a twittering note that they only utter when flying. They sometimes fly in circles in the air during the daytime; and at night I frequently hear them crying loudly as they fly over the ghastly. In damp, rainy weather they leave the River and alight anywhere and often spend the night away from water.

Colaptes auratus mexicanus. - Common.

Sturnella neglecta. They like to frequent the patches of dock or Rhubarb which grow in the bottom and are now in flower.

Zonotrichia gambeli intermedia. - It seems to be the most abundant Sparrow now.

Nettion carolinensis. - Still common.

Sperquedula carolinensis. - One large flock.

Anas boschas. - Still common.

Zenaidura carolinensis. - Still scarce.

Not a dozen were seen between the Post and Blackford's, both ways.

Sayornis sayi. - Musical and abundant.

Flies up in the air & suddenly descends.

Divgs when flying.

Agelaius phoeniceus. Flocks of females seen in either direction along the River, but no males!

Sayornis nigricans. - Getting more common; but the species is never abundant.

Picus scalaris. - The migration seems to have passed, and the species is not now numerous.

Lophortyx gambeli. - A few are met with singly or in pairs now.

Podiceps gramineus has not yet become numerous, although the species remains through the winter.

3830. *Limnunculus sparverius* ♀ ad.

280:593:195:138: cul. + cere, 16: cere, 4: cul, 13: gape, 18: tars., 36: Mtc., 32: claw, 10.

3831. *Lophortyx gambeli* ♀ ad.

288:371:117:99: cul, 12.5: nost., 8.5: gape, 15: tars., 33: Mtc., 34: claw, 9.

3832. *Lophortyx gambeli* ♀ ad.

267:370:113:95: cul, 11: nost., 8: gape, 13: tars., 33: Mtc., 36: claw, 10.

~~3832~~ *Zenaidura carolinensis* ♂ ad.

3832a 338:475:160:168: cul, 15: gape, 21: tars., 23: Mtc., 25: claw, 6. Not skinned.

3833. *Limnunculus sparverius* ♀ ad.

266:590:193:125: cul. + cere, 16: cere, 4: cul, 13: gape, 19: tars., 36: Mtc., 31: claw 11.

3834. *Nettion carolinensis* ♀ ad.

370:595:182:78: cul, 39: nost., 29: gape, 44: breadth of bill below nostrils, 14: height of bill at extreme base, 15.5: bare tibia, 12: tars., 31: Mtc., 41: claw, 6.5.

3835. *Nettion carolinensis* ♀ ad.

356:592:177:73: cul, 35: nost., 27: gape, 41: breadth of bill below nostrils, 12.5: height of bill at extreme base, 14: bare tibia, 11: tars., 29: Mtc., 41: claw, 6.5.

March 23rd 1885. Ft. Verde, Arizona
Sayornis sayi. Several pairs are building nests. There are two on Capt. Russell's piazza, one at the Hospital, and one at our quarters. They build in the four-story Aztec cliff dwelling on Beaver Creek, and find much amusement in flying up and down the perpendicular cliff, which is studded with the nests of Cliff Swallow (*Petrochelidon lunifrons*), and is the home of many Line-tailed Spermophiles (*Spermophilus grammurus*). *Zonotrichia gambeli intermedia* is still abundant and singing.

May 20th, 1885, Hancock to Ft. Verde.
Returned to Fort Verde, A. T., from a trip to
Deming, New Mexico, on horseback, as Surgeon
in Charge of the 3rd and 10th Regiments of
U. S. Cavalry, exchanging stations between Texas
and Department of Arizona.

May 28th, 1884. Ft. Verde, A. T.
Syrnium saxatilis. - Still present here.

May 29th, 1884 Ft. Verde, A. T.
Phalaenoptilus nuttalli. - Heard at Ft. Verde.

Note on *Poliophtila melanura*. Of the five
or six adult males procured on the trip to
Deming all had the entire web and tip of the
1st tail feather white, while the second is as
the first has been described - i. e. with only
the outer edge of outer web white and narrowly
tipped with the same. The markings are
precisely the same on the (3) adult females
taken; but a young bird of the year has
a faint tip of white to the third tail feather.

In my opinion *Poliophtila plumbea*
is probably immature *P. melanura*; but I
have not yet enough material of *plumbea*
to make a thorough comparison.

June 1st, 1885. Ft. Verde, A. T.
Went down the River this afternoon to look for
nests. *Empidonax pusillus* is breeding plentifully
along the sluice in cottonwood saplings and
willows, many of the nests built in the latter
overhanging the water. Most of the nests were in-
complete, and none that I examined contained
the full complement of eggs.

Melospiza fasciata Say. - Quite abundant
along the stream, but I have hitherto searched
in vain for its nest.

Icteria virens longicauda. - Abundant; breeding.
Several nests were found.

Dendroica aestiva is also breeding plentifully,
but the nests discovered contained young.

Contopus virens. - A nest, probably of
yesterday, was found in a box elder 20 feet up.
Phainopepla nitens. - Abundant.

Geothlypis carolinensis. - Breeding everywhere.
Some nests on the sloping ^{branches} of willows
amid thick branchlets, others in forks or
branches of the cottonwood, some in
mesquites, and many upon masses
of drifted debris lodged in the timber along
the River. Elsewhere, in this region, I
have found it breeding on rocky ledges, and
even upon the ground.

Geothlypis trichas occidentalis. - Breeding
along the River and sluice; singing freely.
Helminthophaga lucida was common.

Pipilo aberti. - Breeding abundantly.

Harporhynchus crissalis. - Young flying.

Astragalinus psaltria. - Its sad and strident
cry is heard everywhere along the River and many
are singing a lively song.

No Blue Grosbeaks (*Amphispiza caerulea*) nor
Lazuli Buntings (*Cyanospiza amoena*) seen.
Syrnium rubicundus. - Only one seen.

June 2nd 1885. Ft. Verde, A.T. A.
 4073. *Melospiza fasciata pallax* 11, 8, ad. Parent of Set No. 1.
 164; 216; 68; 76; cul., 12; gape, 13; tars., 23; wing, 21; el., 5.

The following birds were found breeding:

Mimus polyglottus. Several nests were found containing both young and eggs in various stages of development. Many young are already on the wing.

Geothlypis trichas. A nest was found in a berry bush containing two eggs.

Two nests found on Big Bend Creek and Ash Creek, on May 19th.

Each contained three slightly incubated eggs, all of which were broken when my horse got very close and ran over them.

One nest was found on Big Bend Creek, on May 19th.

One nest was found on Ash Creek in an oak tree.

4073. *Trochilus alexandri*. ♂ ad. Parent of Set 2-1. ^{Wing} 103; 122; 49; 30; cul. from frontal feathers, 21; gape, 26; tars., 4.5; wing, 6.5; el., 2.7.

4074. *Trochilus alexandri*. ♀ ad. Parent of Set 2. 102; 120; 48; 29; cul. from frontal feathers, 21; gape, 26; tars., 4.6; wing, 6.5; el., 2.7.

Botanical Note.

Echinocactus wislizeni. "Beehive Cactus". - Common in many places along our line of march between Fort Verde, Arizona and Tatum, New Mexico. Especially between Maricopa and Meson. On its summit are the fruitages in a circle around the top. They are spineless, with coarse, fleshy scales, as large as a small lemon, pleasantly acid to the taste and filled with large black seeds. Color, yellow. Fruit, scarcely edible. Called "Beehive" and "Fish-hook" Cactus.

June 2nd - Continued

Falco peregrinus naevius. - While walking at the base of the limestone cliff beside Beaver Creek a Duck Hawk flew from a ledge and began to cry "Kwa-Kwa-Kwa-Kwa-Kwa-Kwa" in rapid succession, and frequently flew back to a certain ledge and alighted. I might easily have shot it, but, feeling positive that its nest was upon the ledge where it finally alighted and remained quiet, I thought I would return on the following day and try to reach the nest.

June 3rd. Ft. Verde, A.T.

Returned to the Duck Hawk's nest, followed a narrow cañon to a point behind the cliff and thence to the top above the nest. The wind was blowing, so I lay down and crept to the edge of the rock and looked down. I shied a stone at the spot before the old bird left the nest, and then she wheeled about close to the face of the cliff below me, and then flew to a distance and was joined by her mate. Both birds flew about over and about where I was standing. I then descended through a break in the cliff wall to a rock only a few rods from the nest, and then the clamor of the old birds was deafening and they almost assaulted me, brushing close past me. My position on the sharply-pointed rock was precarious, and made me nervous about shooting. I could see the young Hawks, covered with soft white down and crying lustily upon a bare shelf of rock and thought that I could get to them, so concluded to shoot the old bird, but my aim was unsteady and the bird escaped badly wounded and was watched until it alighted upon the ground at a distance, where I failed to find it, and it never returned to the nest.

I managed to reach the young. There was no sign of a nest. The young were hatched on the bare crumbling limestone shelf in a position slightly screened by a block of stone lying in front of them. They were four in number, and attempted to hide, poking their heads into cracks in the rock. Two were taken home alive, and those remaining were spared with one parent. Fragments of the egg-shells were preserved.

- June 3rd 1885. Ft. Verde, A. T.
 4,075. *Zenaidura macroura*. 2 eggs. *Zenaidura macroura*.
 229: 542: 194: 122: cul., 6.5: nost., 4.2: gape, 24:
 tars., 13: Mtc., 19: claw, 5.
 4,076. *Chordeiles acutibennis texensis*. 2 ad.
 224: 529: 180: 113: cul., 7: nost., 4.5: gape, 24:
 tars., 14: Mtc., 18: claw, 5.

June 4th 1885. Ft. Verde, A. T.
 Went up Beaver Creek a couple of miles
 and saw, in the cañon where the nearer
 cliffs dwellings are a *Cooper's Langer*.
(Pyranga aestiva cooperi). It flew from
 one bend in the narrow cañon to the next,
 but never allowed me to obtain a shot at it,
 until it finally emerged from the mouth
 of the cañon and escaped into the thickets
 bordering Beaver Creek.

A dead Long-eared Owl, in plumage of the
 year was found. But no old ones were seen.

A Raven's nest was found upon an
 isolated ledge of rock in the high perpendic-
 ular wall of the cañon. With much effort,
 got to within a dozen feet of the nest, but
 was unable to reach it. From a projecting
 point above I could see the nest which was
 quite a good way off so that I could not
 distinguish the eggs but am quite sure that
 no young unless very small, were in the nest,
 and I think it contained eggs even at this
 late season. One of the parents flew from a ledge
 close to the nest as I approached, and the
 other parent flew from the nest. They were
 very brave in descending the nest and frequently
 alighted close beside me and flew close to
 me while I was trying to scale the cliff
 which I finally abandoned as impracticable.
Meropides niger. — This species is abundant
 now in this region. No nests have been

found although I have seen several
 families of young birds.

Melospiza fasciata Larap. — Several families
 of young were found just out of the nest, and
 very much to my chagrin, the true eggs which were
 in a nest in a low window of a house above
 the rooming quarters, were found to be new.
 I had set them a couple of days before. —
 Clutch. The eggs were about the size of the
 Common Song Sparrow (*Melospiza fasciata*).
Pyrrhuloxia sinuata. The deep orange
 of the cañon. — I saw a pair of
Pyrrhuloxia sinuata in a vine-covered
 bush near the cañon. — I saw a pair of
 young a high cliff.

Luteo virens calurus. — The in about
 cañon where they are probably breeding.

Ardea herodias. Common still.

Tringoides sperdus. — Abundant.

Second day. — That on some in the
 Baldwin's house contains many eggs. They
 are the old ones but to deeply their number
 of eggs.

Vireo calurus. — I saw one on the water but not
 in a cottonwood in the cañon.

Cathartes aura. — I saw one in the cañon.

Salpinctes obsoletus. — I saw one in the cañon.

Trochilus alexandri? — I saw one in the cañon.
 The cañon is very deep and the water is very
 low. I was walking up the cañon and saw one.

Tamias striatus (cooperi?). — Abundant in
 the cañon. I saw many in the cañon. One
 and a half miles back from the cañon the
 walls, in which are holes and cracks, are
 full of them.

Spermophilus grammurus grammurus. —
 numbers seen in the cañon. Some of them
 have shed the front hair and the hair
 is long-haired & is different color.
 This is very common and is very common.

Geothlypis trichas occidentalis. - A nest containing four (4) young was found.

Pateria virens longicauda. - Several nests were found containing young and two with eggs.

P. aberti. - Nest found containing young.

197. *Tamias striatus dorsalis* ♂ ad. Total length 253
Head and body, 124. Tail from root to end vert., 102
; hairs, 129. Nose to eye, 16; ear, 33; meatus, 32
; tip of ear, 48; occiput, 43. Ear height above
4 Kul, 17; meatus, 21; width, 12. "Dance, 18
; " " 34. Fore leg, 43; Hind leg, 61
; chest girth, 75. Distance between eyes, 17.
Nose to centre of pupil of eye, 19. Tongue whitish, 27.

4077. *Pateria virens longicauda*. ♂ ad. Parent Set No. 3-1.
Eggs, unusually elongated and large. One broken.
197: 248: 85: 88: cul., 13.5: nost., 11: gape 18: tars., 28;
Mtc., 21.5: claw 5.

4078. *Phainopepla nitens*. ♂ ad.
205: 302: 97: 102: cul., 12: nost., 8.5: gape, 16;
tars., 19: Mtc., 17: claw, 6. Irides bright red, bill jet
black. Tarsi + feet, black showing a tinge of brown
in a strong light. Claws black.

4079. *Tyrannus verticalis*. ♂ ad. Parent of Set No. $\frac{a}{4}$
230: 410: 135: 102: ~~nost.~~, cul., 23: nost., 14:
gape 26: tars., 20: Mtc., 22: claw, 7.5.

4080. *Tyrannus verticalis* ♀ ad. Nest + Eggs preserved.
222: 395: 124: 96: cul., 21: nost., 13: gape, 25;
tars., 20: Mtc., 21: claw, 6. Parent of Set $\frac{a}{4}$.

June 6th, 1885. Ft. Verde, A. T.
Rode up the East bank of the Verde River
nearly to Blackford's (3 1/2 miles) and back on
the opposite side. In the afternoon with
Mrs. Mearns & Capt. Baldwin rode to
the nearer Cliff Swellings and up the
Cañon as far as possible, and visited
the Ravens' nest and Peregrine Falcons'
nest.

In the evening rode to Hanco's Rancho (10 miles) to
see a patient.

4081. *Lophortyx gambeli*. ♀ juv. Young with hatched
just barely able to raise themselves off the ground
in flight. The female fluttered and quivered
upon the ground beside me.

4082. *Falco mexicanus polyagrus*. ♀ ad. It sat perched
upon a prominent nubbin on the trunk of a large
cottonwood. It had deposited its eggs some time ago in
475: 1065: 342: 197: cul. + cere, 28: cere, 7:
cul., 22: gape, 31: tars., 58: Mtc., 65: cl., 18.5:
hind claw, 22: inner claw, 20: outer, 17. Irides hazel,
cere, greenish yellow. Bill, pale bluish, mottled
+ tipped on both mandibles with dusky plum-
beous. Tarsi + feet greenish yellow, claws plum-
beous black. ^{Upper stomach contained a L. v. (entire)}
^{but no feathers. Lower stomach contained a few}
^{feathers and parts of the skeleton of Gambel's Quail.}

4083. *Scops asio trichopsis* ♂ ad. Sternum reserved.
209: 555: 160: 83: cul. + cere, 20: cere, 10:
cul., 13: gape, 21: tars., 36: Mtc., 28: d., 10:
Irides, yellow, bill greenish plumbeous, tipped
with horn color, toes, plumbeous, claws dusky
plumbeous. Feet scantily haired. Stomach empty.

4084. *Carpodacus frontalis*. ♂ juv. Parent of nest
and four eggs. Killed with female parent at same shot.
157: 243: 79: 65: cul., 11: gape, 12.5:
tars., 19: Mtc., 19.5: claw, 6.5.

4085. *Carpodacus frontalis*. ♀ ad. Parent of Set No. 4
156: 243: 78: 64: cul., 12: gape, 12: tars., 20:
Mtc., 20: claw, 6. Mated with an immature ♂ - No. 4084.

4086. *Guiraca caerulea* ♀ ad.
181: 282: 89: 72: cul., 18: gape, 19: tars., 21:
Mtc., 22: claw, 6.

4087. *Icterus bullocki* ♂ juv. Parent of set $\frac{a}{4}$ 2nd year.
200: 317: 100: 88: cul., 19.5: gape, 20.5: tars., 25:
Mtc., 23: claw, 6.

4088. *Pyrocephalus rubinus mexicanus*. ♂ ad.
153: 263: 82: 63: cul., 14: nost., 9.5: gape, 17:
tars., 17: Mtc., 14: claw, 4.5

#084 *Contopus richardsoni* (Sex?) ad.
 157; 243; 81; 68; nost., 9.5; gape, 19; tars., 14;
 mte., 12; claw, 4.

June 12th 1885, Ft. Verde, A.T.

4094. *Amurca carmichaeli*. ♂ ad.
 189; 297; 94; 81; cul., 17; gape, 17.5; tars., 21;
 mte., 23; cl., 6. *fallax*.

4095. *Melospiza fasciata* ♂ ad. Nest 2. Set No. 2.
 171; 223; 69; 78; cul., 12; gape, 13; tarsus, 24;
 mte., 21; cl., 5. Irides, hazel. Bill, brownish-black
 above, lined laterally with plumbeous-olive; below pale
 plumbeous-brown, darkest at tip. Feet and claws,
 after brown; Tarsi, fleshy-brown. Singing.

4096. *Melospiza fasciata fallax*. ♂ ad. Part of
 Set No. 2. Nest in a cottonwood sapling, eight
 feet above the ground, in an exposed situation,
 close beside the Verde River.
 158; 207; 65; 73; cul., 12; gape, 12; tarsus, 22;
 mte., 20; cl., 5. Colors exactly as above.

4092. *Tyrannus verticalis* ♀ ad. Breeding. With young.
 224; 394; 126; 96; nost., 13.5; gape, 25;
 tarsus, 18.5; mte., 21; cl., 6.

4093. *Helminthophaga luciae*. ♂ ad. 116; 183; 57; 44.
 nost., 7; cul., 10; gape, 11; tarsus, 17; mte., 13; cl., 3.5

4094. Hummingbird) ♀ ad.
 90; 112; 46; 26; culmen, 17.5; gape, 23; tarsus,
 4.5; mte., 7.5; cl., 3. Irides, hazel. Bill, legs, feet & claws, black.

Campylota saxatilis. - One pair seen.

Zenaidura carolinensis. - Young of year on the wing.

Ardea herodias. - One or two seen.

Melospiza fasciata fallax. - Quite common
 along the Verde and Gila.

Sayornis nigricans. - Several along the Verde.

June 13th 1885, Ft. Verde, A.T.

Found several young *Killdeer* with their
 parents on the Verde; the first I have seen this year.

4095. *Oxyechus vociferus* ♂ imbricatus.
 Length to end of tail, 164; to end of toes, 185; tail, 55

4096. *Oxyechus vociferus*. ♂ imbricatus.

4097. *Oxyechus vociferus*. ♀ imbricatus. All of the above
 were of the same brood and about the same
 size. The female (♀) opened on side under wing.

No. 198. *Castor fiber canadensis* ♀ juv. Young of the
 year. Total length, 387; Nose to eye, 35; A. ear,
 64; meatus, 66; tip of ear, 88; occiput, 83;
 anus, 270. Distance between eyes, 38; chest girth,
 200. Length to end of hairs at base of tail, 311; Ear,
 height above crown, 16.5; above meatus, 18;
 greatest breadth, 22; Arm, 45; forearm from
 joint in front, 41; from olecranon, 52;
 Fore-foot, 41; longest claw, 9; Distance
 between outstretched fore claws, 260. Leg, 62;
 hind foot, 81; longest claw, 9;
 "Fore-leg", 86; "Hind leg", 129; Tail measured
 from hairs below, 83; from anus, 122; greatest
 width, 36; Upper incisor, length from gums, 5;
 width of both at base, 6; at apex, 4;
 Lower incisor, length from gums, 8; width, 6; after
 breadth of hind foot, 69.

~~No. 198~~ *Castor fiber canadensis* ♂ juv. ^{imbricatus}
 No. 199. Total length 390; Nose to eye, 37; middle of
 pupil, 39; ear, 68; meatus, 64; tip of ear, 88;
 occiput, 82; anus, 280. Distance bet. eyes, 36; chest
 girth, 215; Length to end of hairs at base of tail, 312;
 Ear, height above crown, (17), above meatus, 18;
 greatest breadth, 22; Arm, 50; forearm from joint in
 front, 38; from olecranon, 51; Fore-foot, 41; longest
 claw, 9; Distance between outstretched fore claws,
 255; Leg, 64; hind foot, 78; longest claw, 10;
 "Fore leg", 88; "hind leg", (120); tail measured from
 hairs below, 88; from anus, 127; greatest width, 32;
 upper incisor, length from gums, 5; width of both,

39. ~~Foot~~ at base, 6.5; at apex, 4. Lower incisor
length from gum, 8; width, 6.5; (apex), 4.5;
breadth of hind foot, 69. (6.5)

39 Vireo pusillus.

41.

42. Vireo

43. Vireo vicinior, Coues. Gray Vireo.

44. Lanius ludovicianus excubitorides (Sw.) Coues. White-rumped Shrike.

45.

46. Hirundo erythrogastra, Bodd. Barn Swallow.

47.

48. Lachycineta thalassina (Swains.) Caban. Violet-green Swallow.

49.

50. Stelgidopteryx serripennis (Aud.) Baird. Rough-winged Swallow.

51. Pyroanga ludoviciana (Wils.) Bonap. Western Tanager.

To Emma Baldwin.

Your horse is good for hauling wood,
But he can't trot, and never could.

2692,

Now if to ride you feel inclined,
With mind to leave all else behind,
You'll find that Mex is quite too lazy,
And had better borrow my horse, Daisy.

52.

53.

54.

55. Carpodacus frontalis (Say) Gray. House Finch.

2658, 2676, 2677,

56.

57. Astragalinus psaltria

58.

59.

60.

61. Pooecetes gramineus confinis, Baird. Western House Finch.

2689, 2695, 2696,

62. /

63. Chondestes grammacus (Say) Bp. Lark Finch.64. Zonotrichia

2690.

65.

66. *Spizella domestica arizonae* (Coeur) Ridgw. Western Chipping Sparrow.

67. *Spizella breweri*, Cass. Brewer's Sparrow.

2699, 2709,

68.

69.

70

71. *Junco*

72. *Amphispiza bilineata* (Cass) Coeur. Black-throated Sparrow. 2710,

73.

74. *Peucaea*

75.

76. *Melospiza fasciata*

77.

78.

79.

81. Pipilo maculatus megalonyx (Baird) Coues. Spurred Towhee.

81. Pipilo chlorurus (Towns.) Baird. Green-tailed Towhee.

82. Pipilo fuscus mesoleucus (Baird.) Ridgw. Cañon Towhee.

83. Pipilo aberti, Baird. Abert's Towhee.

84.

85. Zamelodia melanocephala (Swains.) Coues. Black-headed Grosbeak.

86. Quiraca caerulea (Linn.) Swains. Blue Grosbeak.

87. Passerina amoena (Say) Gay. Lazuli Bunting.

88.

89. Calamospiza bicolor (Towns.) Bonap. Lark Bunting.

90.

2693, 2697, 2713,

71. Molothrus ater obscurus (Linn.) Coues. Dwarf Cowbird.
72. Xanthocephalus icterocephalus (Bonap.) B.S. Yellow-headed Blackbird.
73. Agelaius phoeniceus phoeniceus. Red-and-buff-shouldered Blackbird.
- 74.
75. Sturnella neglecta, Aud. Western Meadow Lark.
76. Icterus parisorum, Bonap. Scott's Oriole.
77. Icterus cucullatus, Swains. Hooded Oriole.
78. Icterus bullocki (Swains.) B.S. Bullock's Oriole.
79. Scolecophagus cyanocephalus (Wagl.) Catant. Brewer's Blackbird.
100. Corvus corax canivorus (Bart.) Ridgw. American Raven.
- 101.
102. Cyanocitta stelleri macrolopha (Baird) Ridgw. Long-crested Jay.
- 103.

2707, 2717,

2654,

2646, 2698,

2653, 2708

2644'

2667, 2668, 2669,

104. Aphelocoma woodhousei (Baird) Ridgw. Woodhouse's Jay.

9/105.

9/106. Eremophila alpestris

9/107.

9/108. Tyrannus verticalis, Say. Western Kingbird.

9/109. Tyrannus vociferans, Swains. Cassin's Kingbird.

9/110.

9/111. Myiarchus cinerascens, Lawr. Ash-throated Flycatcher

9/112.

1/113. Sayornis sayi (Bonap.) Baird. Say's Flycatcher-Creeper.

1/114. Sayornis nigricans (Swains.) Bp. Black Creeper.

1/115.

1/116.

2652, 2659, 2670

2721,

2711.

117. Contopus richardsonii (Say) Baird. Western Wood Pewee.

118. Empidonax difficilis, Baird. Western Yellow-bellied Flycatcher.

119. Empidonax

120. Empidonax

121.

122. Pyrocephalus rubinus mexicanus (Sel.) Coues. Vermilion Flycatcher.

2700, 2701, 2702, 2703,

123.

124. Trochilus alexandri, Bourc. and Muls. Black-chinned Hummingbird.

125.

126.

127.

128.

129.

130. Cypselus sexutilis, Woodh. White-throated Swift.

131.

132.

133.

134.

135. Chordeiles frontipennis texensis (Lawr.) Ridgw. Texan Nighthawk.

136. Picus villosus harrisi (Aud.) Allen. Harris's Woodpecker.

137.

138. Picus scalaris, Wagl. Texan Sapsucker.

139.

140. Sphyrapicus varius nuchalis, Baird. Red-naped Woodpecker.

141.

142.

2674, 2675,

2680,

2695,

143. Melanerpes formicivorus (Sw.) Bp. Californian Woodpecker.

144. Colaptes auratus mexicanus (Linn.) Sw. Red-shafted Flicker.

145. Ceryle alcyon (Linn.) Boie. Belted Kingfisher.

146. Geococcyx californianus (Less.) Baird. Road-runner; Chaparral Cock. 2725,

147. Coecyzis americanus (Linn.) Bp. Yellow-billed Cuckoo.

148

149. Aluco flammeus americanus (Aud.) Ridgw. American Barn Owl.

150.

151.

152.

153. Scops asio

Seruech Owl.

154.

155.

2661, 2662, 2663,

2673,

156, Glaucidium gnoma, Wagl. California Trogg Owl.

157.

158.

159.

160.

161, Accipiter sparverius (Linn.) Vieill. Sparrow Hawk.

162.

163.

164.

165, Accipiter cooperi, Bonap. Cooper's Hawk.

166, Accipiter fuscus (Gmel.) Bp. Sharp-shinned Hawk.

167.

168.

2664,

2666, 2687,

169.

170. Buteo borealis calurus. Western Red-tail.171. Buteo abbreviatus. Zone-tailed Hawk.172. Buteo swainsoni. Swainson's Hawk.

173.

174.

175.

176.

177.

178. Zenaidura carolinensis (Linn.) Bp. Mourning Dove.

179.

180.

181. Lophootyx gambeli, Nutt. Gambel's Quail.

2718,

2684,

2649, 2650, 2651, 2665, 2679, 2682, 2683, 2686,

Prescott March 1st 1885

My dear Doctor

I enclose two Skunk
heads which I got yesterday
the larger one belonged to a female
skunk of the ordinary kind, the
smaller one was a male & of a
different species it was not
more than half the size of the
other, though it apparently had
reached maturity, its back
had small longitudinal black
& white stripes with a com-
paratively a short & rather bushy
tail - I had previously killed
a male skunk & a wild cat
but was unable to find
their skeletons after receiving
your letter

Yours sincerely

George C. Davis

1152. Oxyechus vociferus (Linn.) Reich. Killdeer.
2685, 2714, 2716, 2716.
1183. Trinoides macularius (Linn.) Gray. Spotted Sandpiper.
1184. Serripes cyanoptera (Vieill.) Cass. Cinnamon Teal.
2655,

June 15th, 1885.

300 Fiber zibethicus. ♂ ad. Beaver Creek at the Spring
Total length, 500. Head and body, 280. Nose
to eye, 31; ear, 55; meatus, 57; occiput, 70
tip of ear 77; end of outstretched hind foot (claw), 572
first girth, 185; belly girth, 270; between eyes, 28.
Mamms 33. Pes, 69; fore leg, 78; hind
leg, 135. Longest fore claw 9; hind claw 11
Ears, height above crown, 17; meatus, 19
Greatest width, 2.0 Tail from base of hairs
to end vertebrae, 195; hairs, 203. From anus
to end of hairs (their insertion,) on butt of tail, 20.
Length of upper incisors 10; of lower, 22.

Putting. It was eating grass in shallow
water when shot, and its mouth and stomach
contained grass. Whiskers, black; the longest 60 mm.

4078 Salpinctes obsoletus ♀ ad. Parent of Set. 60. a
150; 223; 69; 54; cul., 20; most, 13; gape, 24;
tarsus, 22; mte., 18.5; cl., 5.

4079. Salpinctes obsoletus ♀ ad.
151; 219; 69; 55; cul., 21; most, 13.5; gape, 24.5
Tarsus, 19.5; Middle toe and claw, 18; claw, 4.5.

4100. Catharus mexicanus conspersus ♀ juv.

4101. Catharus mexicanus conspersus ♂ juv.

4102. Catharus mexicanus conspersus ♂ ad.

148; 188; 60; 55; culum, 22; most, 16; gape, 25;
Tarsus, 18.5; mte., 17; cl., 5. Parent of Nos. 4100
and 4101, which latter are in perfect first
plumage although still with parent.

10. 218 Mephitis mephitis. Common Spunk. ♀. Skull.
 " 219 Mephitis (Spilogale) florum. (L.) Little
 Striped Skunk. ♂ ad. Skull. Both of the above
 skulls were collected at Whipple Barracks, A.T.
 on February 29th, 1885, by Brigadier General
 George Crook, U. S. A. A letter referring to these
 specimens is copied on page 332, which see.

Heloderma suspectum Cope.

Major Olie captured a Lili Monster in
 Southern Arizona, measuring 26 in. long.
 It was sent to the Smithsonian Institution
 and is believed to be the largest specimen
 on record. It was captured
 at the village of San Mateo in the
 Spring of 1885.

Salpinctes obsoletus. - Nest loc. $\frac{11}{6-3}$. No. 40. The
 is, parent shot beside nest June 15th, 1885.

The six eggs measure as follows. 14.5 X 18.5 (broken);
 14.5 X 18 (broken); 18.5 X 13.5; 14.7 X 18; 14 X 18; 14.5 X 18.
 Eggs, 1 inc. white, with a few sparsely spotted with
 round ^{dots} of ~~reddish~~ brown about the greater end
 ; and ~~about~~ a few minute ^{sparse} dots of the same color,
 most of which are overlaid with shell material, causing
 them to appear ^{pale} ~~light~~ and ~~far~~ indistinct.

The nest was built in a miniature cavern in the
 perpendicular wall of a narrow cañon. The rock
 is sulphate of lime, soft and white. The parent
 was seen to fly from the entrance of her dwelling
 which was blocked up with sticks of surprising size
 to be placed in position by these little birds;
 and the hole was further barricaded by small
 fragments of the soft rock. By thrusting my arm
 to the elbow I could touch the 9, 5, six in
 number, far advanced in incubation. Two
 were cracked when I reached home and the
 remaining four were cleared of their contents with
 much difficulty. The nest ^{proper} was composed
 of stems of plants lined with bark of the red
 cedar, a few owl feathers and cow-hair. It

rested on a large bed of sticks, twigs and rubbish. The old bird birds did not approach the nest, and I was obliged to conceal myself behind some rocks for quite a long time before the female parent returned and alighted at the entrance to the nest, where I shot her.

Capodacus frontalis. - A nest found (June 18th) on a ledge in the cañon just where a Say's Flycatcher would build. One egg; fresh.

Sayornis sayi. - A nest and two eggs was found in the cañon on a shelf of limestone. The eggs were old and their contents dry. The young are now flying.

Canis occidentalis. - A large "Timber Wolf" was seen in the cañon across the Verde. It hung its head and trotted swiftly up the steep side hill climbing steep cliffs with ease and finally disappeared after pausing a moment at the top upon a rock. A few of these large Wolves are occasionally seen between the Past and Morris's ranch on Clear Creek. As many as three have been seen together. This one was gaunt and emaciated.

June 19th 1885. Fort Verde to Fossil

Creek, A. T., 23 miles.

4103. *Urubitinga anthracina* ♀ ad. Fossil Creek at the forks. 355; 1315; 413; 245; cul. + cere, 40; cere, 15; cul. 28; gape, 42; tars., 91; mte., 62; cl., 22; inner claw, 25; outer cl., 17; hind claw, 27. Irides, reddish hazel. Cere, bare skin above and in front of eyes, along gape, and base of both mandibles orange-yellow. Bill plumbeous black; orange at extreme base. Tarsi and feet yellow; claws plumbeous-black. Stomach contained putrid matter.
- 4104 *Urubitinga anthracina* ♂ juv (pullus). Young taken from nest of which No. 4103 is parent. Irides brownish-yellow. Bill plumbeous-black. Tarsi and feet yellow. Claws plumbeous-black.

- June 20th 1885. Fossil Creek 37.5 miles. Verde, A. T., (25 miles) by way of Danell's ranch.
4105. *Columba fasciata* ♀ ad. Fossil Creek. 370; 620; 205; 150; cul. + feathers, 17; nostril, gape, 10; gape, 24; tarsus, 26; mte., 37; cl., 9.5. Irides, light purplish-red, with an inner, narrow yellow-brown; or rim. Edge of eyelid rufous red. Bill yellow with broad terminal band of black. Tarsi + feet, yellow. claws dark plumbeous. Bare skin around eyes, blue.
- 4106 *Homaphea melancephala* ♀ ad. Fossil Creek. 208; 315; 98; 84; cul., 19; gape, 19; tarsus 23; mte., 23; cl., 7. ^{adusta}
4107. *Eremophila alpestris* ~~*chrysolaema*~~ Fossil Creek. 182; 330; 107; 75; culmen, 15; nostril, 10; gape, 17.5; tarsus, 21; mte., 17; cl., 5; horns, 15.

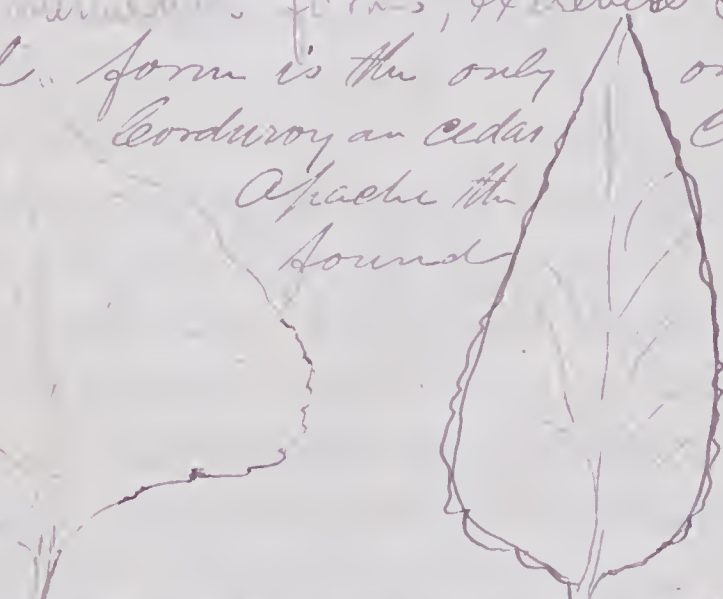
On June 19th. Capt. J. A. Baldwin and I set out to visit Fossil Creek, with Mr. Lang, a miner and an escort of two soldiers. We carried some rations and mining implements packed upon a mule and two burros. We found the trail to the cañon without difficulty; but when we were at the bottom took the wrong fork of the trail which finally led us to the spring and forks of Fossil Creek, both branches of which we explored for several miles, finding tracks of Wolves, Bears, Deer, Raccoons and Beavers.

A pair of Anthracitic Hawks (*Urubitinga anthracina*) were perching at the forks of the stream close to the place at which we had pitched our camp. Their loudly whistled cry is different from that of any bird of prey with which I am acquainted, but is difficult to describe although rendered with great power and force. The parent circled about us for a few times, then retired to some tall pines upon the hillside where they continued to cry vehemently until I ceased to force my way through the thick scrub oak towards them, when both birds flew with a loud scream to a tall pine tree down the

stream, where I succeeded in obtaining a long shot at the male bird, which, although mortally wounded flew beyond my reach before dropping to the ground. The mate flew to the pines far up the steep bank of the canon out of reach, and continued to scream constantly, and followed me up the canon. Towards dusk, I came up with Capt. Baldwin, and he told me that he had discovered the nest of my "sara avis" in a tall cottonwood down the canon, and said that if we hastened we might procure the eggs before dark and secure the other parent. The nest was built in a cottonwood in the same grove in which we first found the birds. The nest had evidently been the birthplace of many generations of Mexican Black Shawks, for it measured four feet in depth by two feet in width. The nest was lined with a layer of cottonwood leaves several inches deep, was very slightly concave, and composed of large sticks much decayed below showing that they had been in position for several years. The nest was about 30 feet from the ground. The female parent remained too shy to return to the nest until I began to climb the tree. At first I essayed to ascend by means of some grape-vines, but they gave way, and then I managed to reach the upper part of the huge bole by swinging from a tall, slender box alder tree, and scrambled with much exertion to the lowest branch. Meanwhile the Hawk had shown great uneasiness, flitting in the air and screaming ceaselessly; but as I recovered her treasure, her parental solicitude remitted her terror, and she sailed over the tree-top. I saw the gun at the lieutenant's shoulder, and decided that he would miss; but he wisely held his fire until the

bird wheeled and rushed directly towards me. A well directed shot dropped it just at the Captain's feet. A minute later I reached the nest and discovered a single nestling about half-grown, with the quill feathers webbed normally, the leaden gray down covering the greater part of the bird. It defended itself fiercely and evinced great pluck and ability to defend itself. The parent bird was also savage and tried to reach its assassin. The Captain proposed that we should attempt to find my wounded Hawk; but the locale was too dangerous, so we abandoned it with regret. Along the stream at this point we found a beautiful species of Geranium (probably Geranium Richardsonii, F. & M.), a very common one - the entire weed or Pursue-root (Antiscia tuberosa, G.), and some large-leaved Violets now in fruitage. The trees in the canon are Cedar, juniper, piñon, pine, live oak scrub oak, box alder, black ash, sycamore, and cottonwood, the leaves of the latter varying from the wide base like those at Verde to narrow oval-lanceolate in the intermediate forms, extremes shown below.

The broad form is the only one seen at Verde Creek, though at Fort Apache the narrow-leaved form is found exclusively.



The following mammal remains were seen today: Lepus sylvaticus arizonae, Lepus callosus texianus, Mephitis (Spilogale) pictorius (a dead one found in Fossil Creek), Little Bat (Myotis yumanensis), Long-eared Bat (Antrozous pallidus), Tamias harrisi,

Lanius asiaticus dorsalis (found at Clear Creek near Wingfields and near the Saw-log, and very abundant in Fossil Creek Cañon.

Spermophilus grammurus grammurus. Abundant in Fossil Creek Cañon.

Neotoma floridana. - All the way. Large heaps of sticks and cow dung heaped around trunks of juniper trees.

Thomomys talpoides umbrinus. Everywhere where there is any loose soil.

Signs of the following species were found:

Canis lupus, Canis latrans, Procyon hernandezii, Ursus americanus, Cariacus anaerotis, and Castor fiber canadensis, all in Fossil Creek Cañon.

The Birds seen were: Mimus polyglottus - probably the most numerous species in Arizona for the reason that, although not found in large numbers in any one locality, the species is spread evenly over all parts of the territory, even those sections that are most dry and barren. Phainopepla nitens. - Common. Several pairs seen down in Fossil Creek Cañon.

Colioptila caerulea. - Found the first in some cedars a few miles the side of the Saw-log. A male was shot, but was spoiled before I reached Verd.

Lophophanes inornatus. In cedars.

Polioptila plumbeus. Found near the Saw-log in families with parents; also in Fossil Creek.

Salpinctes obsoletus. - In Rocks everywhere.

Catherpes mexicanus conspersus. - In Fossil Creek among the cliff-dwellings in the limestone.

Dendroica aestiva. In Cañon of Fossil Creek.

Icteria spurius longicauda. - Nest found in scrub oaks on fork of Fossil Creek 2 young & 2 eggs. The species is abundant in Fossil Creek Cañon.

Vireo pusillus. - Breeding in Fossil Creek.

Lanius ludovicianus excubitorides.

Petrochelidon lunifrons. - Abundant in the massive cliffs of Fossil Creek.

Carpodacus frontalis. - Abundant in Fossil Creek.

Astragalinus psaltria. - " " " "

Chondestes grammacus. - Breeding abundantly from the Saw-log to Fossil Creek. Young with striped breast. Old song well in top of cedars.

Spizella breweri. - A few all the way.

Amphispiza bilineata. - Everywhere.

Perisoreus inornatus (boucardi?). - Found every where in cedars and scrub oaks. Singing on the cedars.

Pipilo maculatus megalonyx. - Singing with

Pipilo fuscus mesoleucus. - In Fossil Creek.

Zamelodia melanocephala. - Singing in Cañon of Fossil Creek.

Protothrus ater obscurus. - Everywhere along the route in small companies.

Sturnella neglecta. - Singing along the way from Saw-log to Fossil Cañon. Sit on tops of junipers and sing deliciously.

Icterus parisorum. - Only in Fossil Creek.

Aphelocoma woodhousei. - First seen a mile the side of the Saw-log. In Fossil Creek, also.

Eremophila alpestris chrysolaema. - In suitable places all the way. Singing.

Tyrannus vociferans. Abundant, and the only Tyrannus seen in Fossil Creek.

Tyrannus verticalis.

Myiarchus cinerascens. - Scarce.

Sayornis sayi.

Sayornis nigricans. Abundant and breeding in Fossil Creek.

Trochilus alexandris and probably several other species were seen on the way and at Fossil Creek.

Cypselus saxatilis. - A few seen flying about Fossil Creek.

Phalaenoptilus nuttalli. - Singing all night in Fossil Creek Cañon.

Chordeiles acutipennis texensis. - Common.

Picus scalaris. - In Fossil Creek.

Buteo borealis calurus. One shot with carbine.
Urubitinga anthracina. One pair breeding in Fossil Creek
Trinunculus shanensis.

Columba fasciata. Three sat in dead pines on steep bank of Fossil Cr. I climbed up and shot one, but it escaped wounded into some rocks. Six were seen and I searched in vain for their nests.

Zenaidura macroura - Yoddy flying.
Geothlypis gambeli. Numerous in Fossil Cañon.
Cathartes aura - A few seen.

Ardea herodias. - Several on Clear Creek.
Oxyechus vociferus. - On Clear Creek and the Verde.

June 20th, 1885. Fossil Creek, A. T.
 Arose at daybreak. I hunted around the forks of Fossil Creek for the nests of the Black-headed Grosbeaks. Hummers were very numerous, but I shot none. A small flycatcher was seen and heard, but I could not secure them, although they were probably new to me. A bird having a note like the Eastern Redstart was also heard but could not be secured. We retraced our steps to the bifurcation of the trail and in so doing I secured my wounded *Columba fasciata* and lost a shoe off my horse. We went down the trail to Daniel's ranch where we had intended to go yesterday. The day was intensely hot. Daniel was not at home. We saw the new Orechis along the stream there and collected some specimens of the exquisite Maidenhair (*Adiantum Capillus Veneris*) which hangs luxuriantly down over the stream, hiding the white limestone rocks. Blackberries were ripe and we ate some of them. Rock Squirrels were numerous. The exertion of retracing our steps up the cañon in the intense heat was severe. At the top we found three Deer (*Oreamnos macrotis*), three lying & one standing beneath a juniper tree. Shot Rattlesnake *Crotalus scorpions* in flocks in the cliffs of Fossil Cr.

June 25th, 1885. Ft. Verde, A. T.
Tyrannus verticalis. - One ^{fearlessly} attacked a female Sparrow Hawk that alighted near its nest, and drove it clear across the parade-ground uttering loud cries and dashing impetuously at it. Later in the day the Hawk returned; and both Flycatcher flew at her and drove her out of their district.

4,108. *Accipiter cooperi*. ♀ juv. Shot in nest; still unable to fly. Nest Bulky; built on the horizontal branch of a very tall cottonwood about 50 feet from the ground. The parent and two young were successively shot before one of them fell. The nest I was unable to secure, as the nest was entirely out of reach. The locality was a deep cañon on Walnut Creek a stream flowing from the Siemega into the Verde River, and the locality a mile or two from the mouth of the Creek. Stomach contained flesh of Gambel's Quail.

June 30th, 1885
 320, A *Myiophobus myiophobus* ♀ ad. Total length, 750
 Tail from root to end of tail, 220; vertebrae, 330; Nose to eye, 33; ear, 59; meatus, 63; occiput, 86; tip of ear, 91; end of outstretched hind feet (claws), 147. Ears, height above crown, 17; meatus, 29; greatest width, 30. Manus, 56; pes, 69; fore leg, 114; hind leg, 153. Claws of fore foot from within outwards, 11, 13, 17, 19, 14; of hind foot, 9, 11, 10, 12, 18.5. Distance between ^{superficial} fore claws (tip) across shoulders, 350. Chest girth, 230. Distance between eyes, 25. Mammary, twelve, 6 on each side. She was, or recently had been, suckling. As the mammary glands were developed and contained milk. Her skunk had killed a number of young chickens in Capt. Raddin's yard and broken up several broods of small young ones.

July 5th Lehigh Creek, A.T.4109 *Geococcyx californianus*. ♀ pullus. Young nestling

Note. The Roadrunner frequently deposits its eggs slowly, sitting on those first laid and occasionally adding to the nest itself as well as to its contents like the Cuckoos (*Coccyzus*). Thus in the above nest No. 41 was hatched two days before any of the others and an egg taken out of the nest was preserved, while the remaining eggs slowly hatched in succession at intervals of several days, a day or two. Egg measures 33×42 .

July 6th, 1885. Ft. Verde, A.T.4110 *Scops asio trichopsis* ♀ juv. Young of the year or adult moulting. The tail is represented by twelve quill shafts 10 to 15 mm. in length. The plumage resembles new feathers of the adult, but is very pinfeathery and incomplete.

Length (to end of ~~tail~~ to tail, 151. Alar expanse, 588. Wing, 180. Tail, not grown out, 12. Cul. and cere, 19. cere, 9. cul. 14. gape, 22.5. tars 36. mte 29. cl. 12. Irides, yellow. Bill, bluish-gray, pointed with horn-color. On dissection this specimen proved to be an adult bird, its ovary showing unmistakable signs of maternity. It sat in a cottonwood-tree beside the Verde River. I was returning from attending a funeral, and had no gun. I asked the Steward if he had a pistol and found he had none. Then I got off my horse and struck it with a stick, and secured the specimen. Stomach contained grasshoppers.

4111. *Falco naevius*. ♂ pullus. Young nestling taken from nest June 3rd, 1885 and kept alive until the 7th.

4112. *Falco peregrinus naevius*. ♀ pullus. Young nestling taken from nest June 3rd, 1885, and kept alive until June 17th, 1885. No. 4111 was not half the size of the other and the fought when - was left together until the little one was overpowered and had to be killed. See description on next page.

July 7th, 1885. Ft. Verde, A.T.

No. 221. *Spermophilus grammurus grammurus*. ♂ ad. Total length, 25.37. ^{to tip of ear} 13.57; ear, 5.30; ornatus, 5.27; tip of ear, 3.77; occiput, 2.58; end of outstretched hind leg, 14.00. Tail from root to end of vertebrae, 8.38; to end of hairs, 12.00; breadth of, 4.12. Breadth between eyes, 1.63. Ears, height above crown, 1.9; above oratus, 1.25; greatest breadth, 2.2. Whisker girth, 1.84; distance between outstretched fore claws, 12.82. Longest fore claw, 3.92; hind, 3.9. Longest whisker, 1.68. Head and body, 12.25. Manus 4.13. Pes, 2.00. Fore leg, 8.55. Hind leg, 11.11. Caught by Valerius under my Port Hospital, where a number of them ^{live} since I first came here. Description of two nestlings of *Falco peregrinus naevius* taken from nest in a cliff on Beaver Creek - the 3rd of June, 1885.

The nestling place was a limestone cliff on the left bank of Beaver Creek, a mile or two from its confluence with the Verde River. The parents were fearless in its defence, and one of them was mortally wounded but escaped. The remaining parent was left to care for the two young that were left from the family of four young ones. Some large fragments of shell found upon the ledge with the young were of about the same coloring as the eggs of *Falco peregrinus* in my collection collected in Greenland by Herr Alfred Benzon, of Copenhagen. There was no pretence of a nest. The young were found were lying upon the crumbling limestone rock on a narrow shelf, about 100 feet from the bottom of the cliff and a little less distance from the top. A narrow block of limestone and a little grass-wood, back slightly, screened the young and perhaps preserved them from falling. They cried lustily when I got near, then creeping with much trepidation along the narrow ledge to which I got access through a little canon of break in the cliff wall. They tried to hide, holding their heads

Height of youngest one when sitting up.

Two of the four nestlings were hatched, and cried loudly all the way home, much disconcerting my hunting hony, "Daisy". There was much discrepancy in size between the nestlings which appeared to be of different ages. I picked out the smallest and largest specimen, between which there must have been 10 days to 2 weeks difference in age. They ate food readily and were very greedy. The larger one would seize the meat from the little one's mouth and bite its bill and face fiercely whenever it opened its mouth. They had to be kept separated, and once when the accidentals got together the little one was so annoyed that it had to be killed. The remaining bird lived a fortnight and grew apace, but a ~~not~~ mother hen ~~upset~~ injured it ~~at~~, and it also died, when its quills were just expanding at the tip.

They cried for food incessantly. The oldest had two notes; a low one like chicken - "Quack-quack-quack"; and loud one like the cry of the adult bird. The height of the youngest specimen when sitting up was only 95 m.m. as shown on the margin. Eyes, black. Bill, flesh-color. Cere, with a pale greenish tinge, Bare skin around eye, flesh-color tinged with blue. Tarsi and feet, bluish flesh-color, the claws just perceptible, tinged with brown.

Oldest specimen. - Eyes, black. Bill, flesh-color, with a bluish cast. Bare skin around eye, pale bluish. Tarsi and feet flesh-color strongly tinged with greenish-yellow, the feet slightly plumbeous above salmon-color beneath. Claws plumbeous.

Both specimens are clothed with pure white down, the quills of oldest just sprouting and body feathers showing symptoms of coming out.

Fort Huachuca, Arizona. April 1, 1885.

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... who has been suffering now for many years from an increased age, a
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 opium, morphia, chloral, and every other sedative which could be thought
 the result has been an entire cessation of the pain, which has not yet retur-
 weeks. I may mention that in the first case it has not been necessary to
 which I consider another great advantage NEPENTHE possesses over othe-
 NEPENTHE may be used with perfect safety in every case where:
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 Double-Strength Nepenthe for subcutaneous

with yellowish

- July 9th 1885. Fort Verde, A. T.
4113. Geothlypis trichas occidentalis. ♂ ad. In full song, as were others of its species. 138; 188; 57; 57; cul, 13; nost., 8; gape, 15; tarsus, 19; mte, 18; Cl, 5. Irides, hazel. Bill, brownish-black. Tarsi fleshy-brown. Feet and claws, brown. In moon but otherwise perfect plumage.
4114. Ardea herodias ♂ ad.

Length to end of tail, 1200; to end of claws, 1550. Wing, 515; alar expanse 1875. Tail, 195; culmen, 144; nostril, 118; gape, 184; height of bill opposite nostrils, 29; width at same place, 20. Tip of bill to eye center of pupil, 180; to occiput, 238. Bare tibia, 120; tarsus, 185; mte, 125. Cl., 16; inner toe and claw 88; cl. 15; outer toe & cl. 98; cl., 12; hind toe & cl., 66; cl. 20. Girth of tibio-tarsal joint, 69; at middle of bare part of tibia, 37; at middle of tarsus 33. Median occipital plumes, 115. The longest 222. Longest neck plumes 225. Longest interscapulars, 275.

Irides, yellow. Bare skin around eye and angle of mouth yellowish-green. An elongated patch of bright yellow at base of bill on either side about midway between nostril and eye, and a small round spot of the same color above it. The bill is blackish at base shading to greenish olive at tip. ^{non-durable} Bill, greenish-yellow laterally, deepening to orange-yellow towards the junction of the two ramus and thence to tip. Legs, with bare tibiae dusky olive brown, with the inner side above tibio-tarsal joint pale greenish-yellow, and a pale streak of the same extending down ^{the} outer aspect about half-way. Tarsi, dusky brownish olive except the under surface of heel, which is yellow. The feet are the same color above, yellow beneath. Claws of anterior toes dark plumbeous indistinctly lined with horn-color above; but the claw of hallux is strongly curved and ^{broadly} lined above and pointed with yellowish horn-color. Shot on the Verde River.

July 10th, 1885. Ft. Verde, ArizonaNo. 222 *Meplites meplitea* ♂ juv.

Total length, 420. head and body, 215; Tail from root to end of vertebrae 150. End of hairs 205. Greatest breadth, 165. ^{center pupil 22} Nose to eye 25; ear ⁴³ 25; meatus 47 tip of ear, 67 occiput, 61 end of outstretched hind leg, 290. Distance between tips of claws across shoulders, 197. Ears, height above crown, 13 above meatus, 21; greatest breadth, 19. Manus, 34 Pes. 47 fore leg 65 hind leg, 76. Longest fore claw 9, longest hind claw, 7. Chest girth, 140. Distance between eyes 23.

This youngster was caught in my hospital ward at night. Longest whisker 27.

The deciduous teeth were all well through the gums, and secret sac contained secretion.

4115. * *Falco peregrinus naevius* * ♀ juv. This bird is one of the same brood as the two young in down (Nos. 4111 and 4112) taken from the nest June 3rd.

This bird was able to fly fairly well from point to point on the cliff; and one of the two birds flew at least 200 yards at a single flight. 412; 920; 287; 170; Cul. and cere, 24; cere, 7; cul., 18.5; gape, 29; tarsus, 47; rite, 63; cl., 17. Eyes, black. Bare skin around eye, bluish-white.

Cere, ^{bluish-gray} pale ~~greenish blue~~; bill, bluish-gray at base, ^{spading dusky} ~~plumbeous~~ black towards tip. Tarsi and feet lemon-yellow; claws, dusky-plumbeous.

Second and third primaries longest and equal. The first intermediate between fourth and fifth. Stomach, empty.

Mrs. Mearns rode with me to the Duck Hawk's cliff for the purpose of securing a specimen in perfect first plumage. The old bird was absent on a foraging expedition. One of the young was seen flying about the cliff in the vicinity of the "nest" or birthplace, before reaching the spot; after we got to the foot of the cliff, it flew several hundred yards to a prominent point on the top of the cliff. It kept constantly expanding its wings and hopped along the ledge in an

restless manner, I tried to frighten it, but did not succeed in making it fly. Then I returned to a shady position beneath the "nest" and waited until it finally returned to the top of the cliff, where we judged it to be far beyond the reach of shot. It was soon joined by another young one, apparently younger and feebler on wing, but which flew a hundred feet to another point on the cliff. Both of them made a loud rushing sound and flapped rapidly when flying. Their wings were constantly brought into requisition in ~~the~~ ^{the} ~~summit~~ ^{summit} about the rocks. They ran along several ledges near the top and seemed afraid of being together or near each other. Although they ran swiftly, they appeared awkward, and kept constantly slipping over the edge of the rock, detaching small pieces of limestone or falling completely over and scrambling back up the nearly vertical rock using both wings and feet. Once one slipped and was obliged to alight about 20 feet below the summit of the cliff, but managed to scramble back in the manner described. They moved about constantly, occasionally making a short flight, during the hour that we watched them, when it began to grow dark, as I advised my wife to try a shot at one of them on the top of the cliff its head and breast were visible, but not expecting the shot would reach it; but it came down to the bottom perfectly dead with a shot-hole through its head. As we were riding away from the spot Mrs. M. called my attention to the parent just returning to her young from the direction of the Verde River. She screamed loudly, and flew from point to point on the ledge uttering loud cries; but flew off to a little distance when I tried obtain a close shot at it, but when I imitated the call of the young, she

slur back and I fired with barrel at her as she passed, but without effect, and left her in possession of the cliffs and the one remaining offspring.

Leioceyx californianus. - Joe the mail-carrier brought me two eggs of the Roadrunner from a nest containing three eggs on Ash Creek near Hudson's ~~sand~~ station. They are white and measure respectively: - 31×38.5 ; 31×39

Black-collared Lizard ad. This large and beautiful lizard was caught in a pile of stones near the Hospital. Length 1 foot (in m) from tip of nose to end of tail. Light green on belly; dark bluish-green ^{under} throat. Two black rings around neck. Tail, light gray, speckled with dark brown. Yellow on upper tip of crown and above eyes. Bluish-green inside of legs. Dark brown, speckled with yellow and striped with gray on the back and outside of legs.

July 11th Ft. Verde, A. T.

No. 223. *Mephitis mephitis* ♂ juv.

Total length, 430. Head and body, . . . Tail, from root to end of vertebrae, 165; to end of hairs, 230; greatest breadth, 180. Nose to anterior canthus of eye, 27; to center of pupil, 31; to ear, 46; meatus, 49; occiput 67; tip of ear, 66; end of outstretched hind leg, 300. Ears, height above crown, 12; meatus, 21; greatest breadth, 18. Manus, 37; Pes, 48; fore leg, 68; hind leg, 90. Longest fore claw, 10; hind claw, 7. Longest whiskers, 30. Eldest girth, 116. Between eyes, 23. Distance between ^{tips of} claws outstretched, across shoulders, 218.

July 16th Fort Verde, A. T.

4116. *Lophortyx gambeli* ♂ pullus. Just hatched. Unable to fly. The head plume is represented by a small tuft of down.
4117. *Lophortyx gambeli* ♂ pullus. Just able to fly. No trace of black throat. Head plume well indicated.
4118. *Leioceyx californianus*. ♂ pullus. Nestling nearly able to fly. Irides deep gray. Bill,

plumbeous-black. Bare skin around eye dusky, plumbeous, becoming pale orange posteriorly. Tarsi and feet, bluish-gray. Claws, dusky. Each feather bears on its summit, a white hair, like those on the ^{same} otherwise naked specimen (No. 4109) taken from the nest on July 5th, 1885. Locality, Cherry Creek, A. T. Brought home by Joe the buckboard driver.

July 14th Ft Verde, A. T.

Rode 6 miles to Parson. Britton's. Hot. Thermometer 98°F , ^{when detached} and 108°F when I returned. A fierce breeze in the river-bottom. Doves are raising 2nd brood. Dozens of them were seen sitting on eggs or young in the cottonwoods. One nest on some rubbish on the ground contained one ^{fresh} egg, showing that some are still laying.

Blue Grosbeaks, Bullocks and Hooded Orioles, Great Blue Herons, Abert's Towhees, Horn-backed Goldfinch, Song Sparrow, Black Pewee, Cassin's and Western Kingbird, Little Flycatcher, Killdeer, Quail, Cowbird, Black-throated Sparrow House Finch, Lark and Rough-winged Swallows, Quails and Lark Finches were the most abundant species of birds noticed. The Lark finches seemed particularly affected by the intolerably hot weather. Whenever seen their wings were ~~distended~~ half open and hanging down, and mouth wide open, gasping for breath. The Doves do not appear to experience any discomfort, although the breeze from the white sand of the River-bed where they nestle is like the breath from a furnace.

July 18th Ft. Verde, Arizona.

4119. *Totanus semipalmatus*. ♀ ad. Length to end of toes, 485. 402; 770; 228; 96; culmen 60; bill groove, 40; gape, 68; bare tibia 42; tarsus, 73; ante, 42; cl., 6.5; inner web, 7.5; outer web, 11; inner cl., 5.5; outer cl., 5; hind toe + cl., 14; ll., 4. Irides, hazel. Bill purplish-gray at base, becoming black for terminal one-half. Bare tibiae, tarsi & feet, bluish-gray; claws, black. Stomach contained a mass of beetles' shells.

4120. *Tringoides macularius* ♂ ad. Length to end of toes, ~~194~~ 194; 329; 105; 53; cul., 24; gape, 27; tibia, 12; tarsus, 23; mtc 22; cl., 4. Irides, hazel. Bill, brownish-yellow at base of mandible, shading to black terminally; upper mandible, black, with brownish tinge at base. Bare tibiae, tarsi and feet, greenish-yellow, tinged with gray; claws, dusky.

3121 *Tringoides macularius* pullus. } No. 3120 the parent

3122. *Tringoides macularius* pullus. } Unable to fly.
These birds were one family. The young were still far from able to fly but ran very swiftly. The parent followed and dropped at my feet, when I captured one of the nimble offspring, which was piping loudly, and fluttered just before me for at least an hundred yards. I followed to see how far ~~she~~ it would try to lead me on, and shot ~~it~~ when she flew. ~~It~~ beat the sand with its wings, and appeared to be hopelessly crippled. Not skinned.

4123. *Tringoides macularius* ♂ juv. Barely able to fly a little. The quills of tail measure 28, exclusive of the filamentous prolongations. Wing from carpal joint 77. Irides, hazel. Bill, plumbeous, fleshy at base of mandible. Bare tibiae tarsi and feet greenish-yellow, lighter and more yellow than adult. Claws, blackish.

4124. *Tringoides macularius* ♂ juv. Like the above (No. 4123) and belonged to same brood. The head and neck in both are still in down, except a streak of feathers in the centre of the crown, where they first appear on these parts. The body is feathered except the ^{broad} rump which remains down and streaked medially with black. Both have a black streak extending from the forehead through the eye to the occiput and a dorsal black stripe from the patch of feathers covering crown to the back. One was shot. The other was followed on horseback until fatigued when it was flushed but fell into the Verde River; it dived splendidly and at

- length swam to the shore and was caught.
4125. *Tringoides macularius*. ♀ juv. Young of the year. Able to fly well. All feathered save rump, upper part of neck and head (except crown ^{lores} which are still in down). Irides, hazel. Bill scarcely differing in size or coloring from No. 3120 ad. The bare tibiae, tarsi and feet, greenish-yellow, barely tinged with gray; claws, blackish.
4126. *Colaptes auratus mexicanus*. ♀ juv. 1 full first plumage. Irides, brown. Bill blue-black. Tarsi feet and claw, bluish-gray.
313; 505; 156; 114; cul., 36; gape, 41; tarsus, 29; mtc, 34; cl., 11.
4127. *Coccyzus americanus* ♂ ad.
312; 453; 148; 167; cul., 29; gape, 34; tars, 27; mtc, 27; cl., 7.
4128. *Dendroica aestiva*. ♂ ad.
130; 200; 66; 51; nost, 8; gape, 14; tars, 18; mtc, 15; cl., 4.5. In full song.
4129. *Buteo swainsoni* ♀ ad.
540; 1380; 440; 245; cul. + cere, 34; cere, 13; cul., 24; gape, 40; tars, 78; mtc, 61; cl., 20. Irides hazel. Cere, bare skin around eye and along gap, yellow. Tarsi and feet, ^{light} orange-yellow. Claws, plumbeous-black. Bill, bluish at base, shading to blue-black terminally. Stomach contained several kinds of ^{light} food.

July 20th. Ft. Verde, A. T.

224. *Tamias harrisi*. ♀ juv. Half-grown. No measurements were taken.

July 22nd.

4128. *Coccyzus americanus* ♂ ad. In full call.
307; 435; 152; 157; cul., 50; gape, 35; tars, 27; mtc., 27; cl., 8.
Note. - Yellow-billed Cuckoos are numerous now, in cottonwoods along the Verde River. To-day their notes were heard continually.

No. 225. *Fiber gibethicus* ♂ ad.

Total length, 495 Head and body, 285
Tail from root to end vertebrae, 197; hairs, 210
Ears, height above skull, 19; meatus, 21;
greatest breadth, 20. Nose to eye, 33; ear,
36; meatus, 54; tip of ear 84; occiput, 71
end of outstretched hind claws, 378. Distance
between eyes, 25 Chest girth, 170.
Manus, 31 Pes, 69; Fore leg, 75
Hind leg, 120 Longest whiskers, 60 Longest
fore claw, 9 Longest hind claw 10 Distance
between claws (tips) across shoulders, 225.

The os penis was highly developed and the animal
tough, the bones hard and cartilaginous extremities
ossified, which characters, together with the
teeth indicate a very old specimen.

It was first seen under water and was watching
me. I killed it with No. 12 shot just as it emerged
on the edge of the sand of the Verde River.

No. 4/29. *Oxyechus vociferus*. ♂ pullus in down; unable to
fly. The parent made a great outcry. Only two
young were seen. The other one disappeared like magic
when I stooped to pick this one up. Other young
of the year were seen flying as well as their parents,
who still guarded and watched over them.

Eyes, very dark hazel. Eyelid, orange-red
Bill plumbeous-black. Gape & feet ~~with~~ ~~plumbeous~~
flesh color. tinged with greenish gray, especially
the joints. Claws dusky plumbeous.

No. 4/30. *Tringoides macularius*. ♂ pullus. Young barely
able to fly a yard or two. Doubtless the progeny
of No. 4/20, as it was found in the same spot.
Eyes, very dark hazel. Bill dusky plumbeous,
with a shade of olive. Legs & feet dull greenish-yellow.
Claws plumbeous.

Ardea herodias. - Rather common, as
many as four seen at once.

Tringoides macularius. - Young of year
are flying as well as old ones.

Totanus flavipes. - One seen and shot
at, but escaped.

Pyrranga ludoviciana. An adult male
seen in cottonwood near the Verde River.

Goniaptes melanocephala. A female
seen beside the Verde.

Pyrocephalus rubinus mexicanus. An adult male
seen beside the Verde.

Note (July 18th, 1885. Ft Verde, Arizona). - Great
Blue Herons were quite numerous.

A Solitary Tattler (*Rhyacophilus solitarius*) was
seen. The young of *Tringoides macularius* were
in small flocks. Black Flycatchers (*Empidonax
nigricans*) are abundant along the Verde.

Aquila chrysaetos canadensis. - An Eagle sat
beside the water on a ~~very~~ low, stony point.

It barely showed a little white on its tail. I got
within gunshot of it, but did not fire as my
shot were too small.

July 24th 1885.

Catostomus cyprinus ♂ ad. Verde River at Ft Verde, Arizona.
Humpbacked sucker. Entire ventral surface
orange yellow, the pectoral & ventral fins very
slightly dusky, their dorsum marked basally
with dusky olive. Iris yellow, greenish

Lat. h. 90 olive granulation. Lower third of head
Dorsal 14 including end of snout, orange yellow in
Anal 7 strong contrast with the flesh colored snout.

Ventral 10 Sides, salmon color, granulated with dusky
Pectoral 15 base. Dorsum, dark olive brown, including
Caudal 17 top of head, the anterior ridge of spine (hump) pale olive.

Gills, ~~the~~ flesh color, the yellow of ventral
surface extending and blending with
the olive of the dorsum on the side of
the head posteriorly. Dorsal fin, olivaceous.

Anal fin, orange yellow indistinctly marked
with dusky. Caudal yellowish olive. Peritoneum
black. Total length, 490. To caudal 435
Tip of snout to nostril, 44; eye, 54; middle of mouth

60; width of orbit, 12; depth 9.5; pupil, 4.8
 snout to preopercle 85; opercle, 115; distance
 between orbits, 42. Length of caudal fin 80
 Dorsal fin: height anteriorly 56; posteriorly 29
 width at base 77; upper edge antapread 80
 caudal fork 37 (Lockington, Proc. Acad. Nat. Sci. Phila. 1880.
 Jordan & Gilbert's Synopsis p. 129.)

July 25th Ft. Verde, A. T.

Rode down the River as far as Jordan's lower
 crossing, following the edge of the stream all the
 way. Returning followed the sluice.

About a dozen Green Herons (*Butorides virescens*)
 were seen. One family of young of the year
 with down still on ^{feathers} crown, with their parents. I shot
 an old and a young of them, and an older
 bird of the year.

Ardea herodias. - Common. An young of the year shot
Oxyechus vociferus. - As many as 15 seen together
 They were mostly young of the year.

Fringoides macularius. - A number seen.

Fulica americana. - One seen swimming
 around an Island in the Verde. It swam over
 to the earthen shore and hid under some overhanging
 grape-vines.

Two Muskrats (*Fiber zibethicus*) seen on the sluice.

The object of my trip was to shoot a white Heron
 which Mr. Jordan told me stayed around his dam
 all day yesterday and the day before; but it was
 not there to-day.

(Cleome)

The yellow-caper plants are very rank in place
 down the River. I rode through a large patch that
 were higher than my head when riding. I did
 not attempt to shoot any Hummingbirds; but
 dozens of them were seen in every patch of caper.
Pyrocephalus rubinus mexicanus. A number
 of them. They like to sit beside the water on dry
 twigs just as *Agelaius nigricans* does.

Young families of Yellow-throats, Song-sparrows, Chats,
 Summer Yellow Birds, Lazuli Finches, Blue Grosbeaks

Robins, Towhees, Lutescent Thrasher, Song Sparrow, House
 Finch, and Little Flycatchers were seen; and
 many other birds were abundant.

4131. *Pyrocephalus rubinus mexicanus*. ♂ ad.
 156; 270; 85; 65; cul, 14; nost, 10; gape, 19; tars.
 17.5; mte, 15; cl., 5. A mated pair.

4132. *Pyrocephalus rubinus mexicanus*. ♂ ad. Mate of 4131.
 157; 260; 79; 62; cul, 14; nost, 10; gape, 19; tar-
 sus, 17.5; mte, 16; cl, 6.

4133. *Butorides virescens* ♀ juv. Young of the year
 with parent (No. 4134). Irides, yellow. Bare skin
 on face, greenish-yellow. Bill, yellow, tinged with olive,
 strongly above, and becoming dusky towards tip.
 Bare tibiae, tarsi & feet greenish-yellow, the latter
 yellow beneath. Feathers of crown
 tipped with down. Family still together
 Length to end of tars, 600; 470; 704; 190; 68;
 cul, 54; gape, 75; bare tib., 27; tarsus, 57;
 mte, 61; cl. 9. Claws, horn-color.

4134. *Butorides virescens* ♀ ad. Parent of No. 4133.
 Length to end tars, 615; 500; 715; 197; 76; cul, 65;
 gape, 79; bare tib., 23; tars., 52; mte, 58; cl., 10.
 Irides, deep yellow. Bare skin of face, greenish-yellow
 yellowish anteriorly. Bill with dorsum of maxilla and
 edge of mandible (its basal third), brownish-black; man-
 dible and edge of maxilla for its basal two-thirds,
 yellow. Bare tibiae tarsi & dorsum of feet, greenish-
 yellow; feet orange-yellow beneath.

4135. *Butorides virescens* ♀ juv. Young of year. Older
 than No. 4133. Irides, yellow. Bare skin of face
 greenish-yellow. Bill brownish-black above and on
 edge of basal third of mandible. Mandible and
 edge of maxilla pale greenish yellow, tinged with
 purplish-brown. Bare tibiae to below heel-joints,
 pale sage green. Front of tarsi & dorsum of tars
 greenish olive; tarsi pale yellowish posteriorly.
 Feet yellow beneath. Claws, pure olive. The soft
 parts are much darker than No. 4133. There is no
 down of feathers of crown. Length to end of tars, 580;

460; 700; 193; 70; cul., 56; gape, 74; bare tib., 21; tarsus, 50; mte., 55; cl., 10.

4136. Ardea herodias ♀ ad. ^{juv.} (Young of year)
Length to end of toes, 1420; 1110; 1770. 475; cul., 133; nostril, 105; gape, 169; height of bill opposite nostrils, 25; width at same place, 18; tip of bill to center of pupil of eye, 168; to occiput, 220; bare tibia, 95; tarsus, 171; mte., 120; cl., 16; inner toe & cl., 89; cl., 14; outer toe and claw, 98; cl., 12; hallux & cl., 63; cl., 20; girth of tibio tarsal joint, 67; at middle of bare part of tibia 38; at middle of tarsus 32. Irides, orange yellow. Bare skin around face, ^{bluish} ^{elevated}, an ^{elevated} patch of greenish yellow towards base of bill and another above eye anteriorly. The bill is blackish at base of mandible shading to olive towards tip; mandible greenish-yellow laterally, deep orange yellow towards the junction of the two ramus. The latter color extending to extremity of mandible.

Bare tibia above greenish-yellow, with a couple of rows of dark scutellae behind. Tibio-tarsal joint, tarsi & dorsum of feet, dusky olive-brown. Feet pale yellow. Ventrals, claws, dusky-plumbeous. Head plumes worn to mere threads.

A patch of reddish-brown feathers surrounds the vent.

- No. 226. Mephitis mephitis ♀ juv.

Total length, 590; head and body, 255; tail from root to end vert., 228; hairs, 335; ^{to eye}, 31; ear, 52; meatus, 61; tip of ear, 81; occiput, 72; end of outstretched hind leg, 390; ears height above crown, 45; meatus, 25. Greatest breadth, 25.

Distance between eyes, 22. Chest girth, 140.

Distance across shoulders between tips of claws, 280.

Manus, 42. Pes, 61. Fore leg, 87. Hind leg, 105; longest fore claws, 12. Longest hind, 8.6.

Tail measured from sacrum after skinning 255.

This Skunk had a large and well filled rectum as it was running about beneath the cottonwoods about sundown. When I pursued it, twice it presented its rear and flourished its beautiful bushy tail in a

threatening manner, but failed to discharge its battery when shot.

4137

- July 27th Ft. Verde, Arizona.
4137. Steganopus wilsoni. ♀ ad. Not quite through the autumnal moult; shows red feather in neck on back. Irides, dark hazel. Bill, black. Bare tibia, tarsus and feet, dusky-plumbeous, tinged with greenish-yellow; claws, black. 248; 428. 133; 60. cl., 36; gape, 38; bare tibia, 21; tarsus 34; mte., 30; cl., 5.

4138. Herodias alba egretta ad.

Length to end of toes, 1230; 945; 1420. 378; 145. culmen, 107; nostril, 99; gape, 184; height of bill opposite nostrils, 22. breadth at same place 155. Tip of bill to center of pupil 135; to occiput 170. Bare tibia, 118; tarsus, 150; mte., 116; claw, 16; inner toe and claw, 87; claw, 15; outer toe and claw, 95; claw, 12; hallux and claw, 63; claw, 21. Girth of tibio-tarsal joint, 29; of middle of bare part of tibia, 29; of middle of tarsus, 27. Irides, silver, yellow; very handsome and brilliant. Bare skin around eye and on face anteriorly, greenish-yellow. Bill, orange-yellow tipped with black on terminal (20 mm) of dorsum of maxilla with black. Bare tibiae tarsi & feet, black. Claws plumbeous-black; the comb of middle claw, horn color. The following specimens (Nos. 4139 to 4141) are all colored precisely like this one. Plumage all entirely pure white. None have dorsal plumes.

4139. Herodias alba egretta ♂ ad.

Length to end of toes, 1370; 1030; 1495; 393; 154. culmen, 115; nostril, 100; gape, 145; height of bill opposite base of nostril 22; width at same place 15; Tip of bill to center of pupil, 143; to occiput, 190. Bare tib., 113; tars., 167; mte., 125; cl., 17.5; inner toe & cl., 95; cl., 17; outer toe & cl., 106; cl., 13. Hallux & cl., 68; cl., 23. Girth tibio tars. joint, 58; tib., 37; tars., 32. Colors as above.

4140 *Herodias alba egretta* ♂ (ad.)
 Length to end of tarsus, 1400; 1030; 1530; 410; 160;
 cul., 112; nostril, 101; gape, 142; height above nostril, 22;
 breadth at same place, 16; bare tib., 133; tarsus, 173; ante,
 130; cl., 17; inner toe & cl., 96; cl., 16; outer toe & cl.,
 112; cl., 13; hallux & cl., 73; cl., 23. Girth at tib-tarsal
 joint, 55; bare tib. 29; tars., 30.

4141. *Herodias alba egretta* ♀ (ad.)
 Length to end of tarsus, 1160; 900; 1320; 368; 141;
 Cul., 100; nostril, 91; gape, 132; height, 20; width, 14;
 bare tib., 102; tars., 136; 108; 15; inner toe & cl., 82;
 cl., 15; hallux and cl., 60; cl., 20; outer toe & cl., 94;
 cl., 12. Girth l. tars. jt 52; tib 27 tars 28.

4142 *Colaptes glaucus americanus* ♀ juv
 417. 1130; 357; 165; cul. deep 33; cere, 17;
 cul., 21; gape, 48; tars., 79; ante, 57; cl. 21
 Eyes, black. Bill, including cere, flesh color,
 tinged with plumbeous. Dorsum of tars pale
 olive - grows yellowish beneath. Claws dusky-olive.
 Stomach contained *Scolecophagus* and small rodents, hair, etc.

4143 *Aideia herodias* ♀ juv.
 Length to end of tarsus, 1470; 1125; 1820; 490; 204;
 cul., 132; width, 112; gape, 170; height above base of
 nostril, 29; breadth at same, 20. Tip of bill to center
 of pupil, 169; to occiput, 215; bare tibia, 120;
 tars 174; ante, 123; cl., 17; inner toe & cl., 93;
 cl., 15; outer toe & cl., 103; cl., 13.5. Girth at tib-tarsal
 joint, 68; of middle of bare part of tibia, 39; of middle
 of tarsus 137. Irides, yellow.

Irides yellow. Bare skin around eyes & face green
 blue, yellow above and in front. Maxilla
 dusky olive-brown, mandible yellow-orange
 orange from junction of vomer to tip. Bare tibia
 purplish fleshy brown, dusky in thin outer
 aspect. Tibio-tarsal joint purplish-brown except
 behind where it is yellowish, like the lower surface
 of leg. Tarsi & dorsum of tars. black, tinged with
 purple-brown. Claws, plumbeous black.

No. 28. *Grus viridis turticandus* ♂ ad. Desert Hill, 20 miles north
 of Phoenix. May 15, 1885. Skull only. No measurements.

4144 *Aideia herodias* ♀ juv.
 Length to end of tarsus 11400; 1080; 1750; 475; 175;
 cul. 131; nostril, 111; gape, 166; height of bill
 25; breadth, 19; tip of bill to middle of
 pupil, 165; occiput, 205; bare tib., 143;
 tarsus 174; ante, 122 cl., 17. Inner toe & cl.,
 92; cl., 15; outer toe & cl., 98; cl., 13; hallux
 and claw, 61; cl., 20; Girth of tibio-tarsal
 joint 71; bare tib. centre, 32; tars., 34.

This is a young bird, just well on wing. Body
 small. Tibial feathers buffy white, with
 pale fulvous centres, those of edge of wing and front
 of neck but little darkened, instead of strongly
 reddish as those parts are in the above (No.
 4143) specimen which, although a bird of the
 year is much older and more developed.
 This bird is prefeathering, the feathers not yet grown.

Early this morning, Mr. Jordan came in to the
 Post with melons. He called me over and told
 me there were four "White Cranes" at the Verde
 crossing, and that they were slowly working
 up towards the mill, where I might probably
 intercept them and shoot one if I hurried.
 I was a member of a General Court Martial
 which was to meet in 45 minutes but then I
 would run down and try for a shot unarm
 and trust to luck to get back in time possibly
 with a "Crane" for my trouble. At noon
 a young lady added fuel to the flame by telling
 me there were some "Geese" on the River
 opposite to the Post. I saw a great White Egret
 just alighting as I went out of the back gate.
 My attempt to stalk it was unsuccessful and
 four of the beautiful birds arose before I
 was quite within range, so I held my gun
 and tried to pluck them, but the next minute
 they flew, they were out of sight at the
 Verde, and I had not enough time to
 follow them. After the court was over.

Serpents of Arizona.

Number.

1. Yellow-banded Water Snake. Fort Verde, A.T. May 22, 1884. Two of these large and beautiful snakes were found upon the hard sand beside the Verde River.
 2. Small Striped Water Snake. Fort Verde, A.T. May 22, 1884: This pretty serpent was found in a little pool of stagnant water left by the subsidence of the Verde River, where it was feasting upon the small tadpoles of the Verde frog () which were abundant, and which were found in its throat in numbers. The snake was very active and vivacious when in the water, diving with perfect ease.
 - 3 & 4. Small Yellow-striped Water Snake. Whipple Barracks, Prescott, A.T. May , 1884. One of these specimens had swallowed a full-grown Tree-frog () whose head and fore-legs protruded from its jaws. A number of these pretty snakes were seen in a clear rapid stream which empties into Granite Creek, at the Point of Rocks, near Prescott.
- Note. - Near Prescott, on May , 1884, I saw a large, thick Snake about $4\frac{1}{2}$ feet long, which was broadly striped with yellowish, longitudinally, among some large piles of rocks near Granite Creek.
- Note. - On May , 1884, I killed two old Rattlesnakes () in Peach Springs Canon, when riding up to the Springs from the Grand Canon of the Colorado. Rattles of one, nine in number preserved.

5.

Large Smooth Grass Snake. Ft. Verde, A.T. May 23, 1884. The first of the species seen. Found in dry ground near the Verde River.

July 27th - Continued from p. 399

I mounted "Loring" and rode down to the crossing, thence up the River. At the bend above Beaver Creek, I came upon a Wilson Phalarope (Seymouria wilsoni) which flew in a circle and alighted again close beside me. I dismounted to shoot it, but it flew away when I was doing so and alighted in a tree a little way above. I followed, and was going to shoot it, when I saw a White Heron standing knee-deep in water still farther up. I left the Phalarope and went toward it. It did not fly until I was within range and then I fired two shots without killing it, as it flew behind some willows and did not reappear, so I think I wounded it, but could not find it on search. This was not a great White Egret. It looked like a young Blue Heron (Florida carulea), a species which I saw here. It was not pure white all over but marked with plumbeous. It was about the size of Florida carulea or Gargetta candidissima. The Greater Willets sold on July 22nd was also seen but not shot at. Half a mile farther up the Verde, two great White Egrets (Herodias leucocorypha) were standing on a sandbar. They just going to fire when they flew up the river. I followed a little way and found a family of Swainson's Hawks with their parents, but did not attempt to shoot any, as my arsenal is scarce and I did not wish to expend any of it on them. The flock of Great White Egrets was soon seen circling up the river, frequently alighting on the willows and cottonwood and willows, and soaring in easy graceful curves.

At last, they all rose up together in a flight over the further side, and I rode back across the stream, beneath the cottonwoods, until opposite the Herons when I crept out to the bank and obtained a long shot at a Heron upon the opposite margin; but it flew up the stream, whilst its companions (together) flew down but circled and disappeared from view up the river. I then rode at a gallop a couple of miles ^{across a wide bend} to the Black Horse crossing, and succeeded in heading them off. While I was "scheming" to outwit the wary birds, I saw that they alight in a sluice on the near side where they were hid from view by some willows. A single bird remained on guard in the sand flat far out in the middle of the River bed. I succeeded in reaching the willows, but this solitary bird kept its eye constantly upon my motions, but seemed bent upon flying up the stream and did not attempt to pass me. Perhaps, too, it did not want to desert its fellows that were unsuspecting of danger. At length I gained the margin of the River exactly opposite the lonely Heron that faced the sand bar with measured stately steps, stopping and turning its breast towards me for a moment, when I would crouch low to the ground when the Heron would again resume his promenade. I could now see the two Herons below me feeding "Knee-deep" in the sluice; but saw no way of approaching them unobserved. At length I concluded that my best plan was to try a long shot at the sentinel and hope that the others would fly overhead in attempting to join it, in case it flew up the stream. Moving carefully I sent a load of 4's after this handsome target; but it turned and flew down to where the other two were; but an other one before unobserved flew from

beneath the edge of the ground close in front of me and was dropped upon the sand-flat with my remaining barrel. The two Herons below flew in circles about the sentinel after he alighted and afterwards circled around my wounded bird that had then reached the water and waded in up to its belly; but they were too far off for a sure shot so I held my fire, but the fellow down the stream and did not return. I tried to stalk the sentinel but when I reached the proper spot, on looking over the bank I was pleased to see him lying dead upon the sand. Mounting my horse again, I rode down following the windings of the River. A young Great Blue Heron (*Ardea herodias*) was shot. It ran to shore and was only overtaken after a race on shore. It croaked loudly when caught and let me know. An other Great Blue was shot before and hung up in a tree at the mouth of Beaver Creek. Nothing of interest save the shot of spotted Sandpipers (*Tringoides macularius*) and Killdeer (*Oxyechus vociferus*) were seen for some time, save the beautiful Vermilion (*Pyrocephalus rubinus mexicanus*) and several other flycatchers, until we came to a flat at the bend 500 yards above where I fired at the first Heron, and then I saw a bird lying dead in the shallow water with wings extended; carefully packing this bird as a specimen I proceeded and saw on our way two families of Swainson's Hawk. *Buteo swainsoni* upon some dry snags near the River. Upon a large dead tree with its half dozen extended arms sat a family of four Great Blue Herons. Two of them were fighting each other apparently with great fury and flapping their wings. At the (Beaver)

down three Great White Egrets were seen. They were constantly rising from a bunch of Cottonwood trees and quick to alight immediately in some neighboring branch.

At length they settled permanently for the night, but I upset their plans by creeping unobserved through the line of tall cottonwoods to the bottom of the very tree in which they sat. They flew out together, I fired a shot off at two, but only killed one bird. The rest disappeared in the dusky twilight before they had flown far. The evening was extremely beautiful. The sky was dark with clouds. It had been raining fast of the afternoon, but at sunset the mountains in the south were bathed in purple light and spanned by the widest and most brilliant rainbow that I ever remember to have seen.

It was in the dusk of twilight that I reached an isolated pool in the bed of the Verde where I had seen a Greater Yellow-legs (*Totanus melanoleucus*) earlier in the day. It is very shy and has remained near this spot since July 22nd when I missed a shot at it. Now it arose and flew with its loud notes down the River and alighted on the margin of the river. I dismounted intending to shoot it, but an Owl flew past me with a dull scream. I recognized it at once as the Barn Owl (*Bubo flammeus americanus*). It flew over to the steep mud bank across the Verde, and went into a hole in the bluff. I went over and saw a singular group of these remarkable creatures sitting in holes along the bank. The old one flew screaming at me. I fired my last cartridge at it, but in the dusk failed to bring it down. A few upon the bank and alighted, I suspect

it was wounded and dropped. As it shot several of the few screaming hoarsely and arching over my head. I had in cartridges loaded heavily with 8 buckshot each, but not until I fired the last shot at the audacious birds did one drop winged to the ground. It screamed furiously when I caught it. The rest followed me screaming angrily as I rode away. They frequently alighted on dry snags of wood trees and on the edge of the low bluff above their nest. One alighted upon the level sand-flat.

I returned with

4 Great White Egrets (*Herodias alba Egretta*.)

2 Great Blue Herons (*Ardea herodias*.)

1 Wilson's Phalarope (*Steganopus wilsoni*)

1 Barn Owl (*Bubo flammeus americanus*.)

Total 8, which, with a General Court Marshal kept me skinning all the next day.


A Black Tern (*Hydrochelidon leuciformis*) was seen flying down the Verde this morning. I went down to try a shot at the Egrets. This is the first I have seen since I shot one of a pair on the Verde, about this time of last year.

July 29th Ft Verde, Arizona
To-day I went out to hunt for Great White Egrets and the Greater Yellow-legs, and to hunt for the Barn Owl. Steward Stossmeister saw a Great White Egret near the saw-mill yesterday. Mr. Jordan saw one at his dam on July 23rd for the first time, and it remained there several days. The first Kingfisher (*Ceryle alcyon*) was seen to-day on Beaver Creek. It was an adult ♀ and I shot it after a good deal of work. When I rode across to pick it up, as I jumped over a projecting log, an animal splashed into the water. I thought it was a turtle at first and even after I saw it swimming until it got out into

deep clear water, when I saw that it was a beautiful little Grebe which could be none other than the St. Domingo Grebe (Tachyastes dominicus, Linn.). Every movement was plainly visible as it swam with great strength and swiftness down the stream around a mass of projecting debris in which it had been hiding. I sprang towards this point and in an instant was looking over a smooth expanse of water below, but nowhere could this little Grebe be seen, and an extended search up and down the stream, and beating the underbrush and drifted debris along the margin, failed to discover its hiding place.

A Great White Egret (Herodias alba egretta) was seen circling in the air at a considerable height, and a Cooper's Hawk (Accipiter cooperi) was hunting quails.

I secured the solitary specimen of the Greater Yellow-legs (Totanus melanoleucus) at the same pool where last seen, and then visited the Owl's hole in the bank. The Great White Egret was twice flushed but was very shy and wary.

The Owl's hole was smoothly dug  out, the top of the entrance arched but level below. It was placed where the water runs close to the perpendicular clay bank, the place being unapproachable from below on account of the dangerous quicksand early in the season, and equally impregnable from above. As I approached I made a loud & creeping noise, which immediately brought two of the most singular fisher-men and at the same time beautiful creeps that I ever beheld to the front of the burrow. A charge of lime shot killed one and injured the other, which flapped

out of the hole into the river. They are very hard to kill. The young and old are about the same size but the old are paler beneath, and in fact, all over. One was an adult, the other a bird of the year. The burrow was neatly excavated, roomy and perfectly level upon the bottom, which was strewn with pellets of bones, hair and feathers. There then was four feet from the entrance and the enlarged room at the extremity was two feet or more in height and width. Only the remaining dead bird was found within. I searched all the holes and crevices in the vicinity in hopes to find the rest of the birds, but saw none of them, and finally searched the bank and scattered mesquite above for dead or wounded ones from the night's shooting, but none were found. I am confident that more than three were seen at once, and probably half a dozen.

It was so intensely hot that I returned to prevent my bird from spoiling although I wanted to hunt for the Egrets and the little Grebe, which would have been a great prize.

It was fortunate I did so for we had one of the heaviest showers I have seen at Verde soon after I reached home.

4145. Totanus melanoleucus ♀ ad. This has been seen at one place on the Verde River since July 22nd. Its left leg has been amputated or at least is missing 13 mm below the tibio-tarsal joint. Iro + feet, greenish-yellow. claws dusky. Sides, rostrum, black, light on same of mandible. Length to end of claws, 440; 363; 135; 97; 21

cul., 57; gape, 44; bare tibia, 39; tarsus, 61;
 mte, 41; cl., 5.5.

4146. *Aluco flammeus americanus* ♂ ad.
 385; 1110; 328; 150; cul. + cere, 32; cere, 17
 cul., 20; gape, 45; tarsus, 82; mte, 56; cl., 20
 inner toe + cl., 54; cl., 23; outer toe + cl., 45; cl. 19
 hallux + cl., 32; cl., 18. The inner ^{toe} claw are
 the longest, the middle + outer successively shorter.

The middle toe is of the same length as the
 inner, but the latter has a longer claw by 3 m. m.
 This bird nearly white beneath in strong
 contrast with the following specimen (No. 4147)
 which is a fully developed bird of the year
 doubtless this year's progeny of No. 4146.

There is a narrow circle of ^{forming the} feathers bordering
 the neck which are wide at base, strongly tipped
 with fulvous, and these tips edged with black.
 The sides of the neck are yellowish-fulvous; suc-
 ceeding the dark collar the chest is pure white
 fading into very pale fulvous on band of white
 crosses the breast, and is prolonged down
 the flanks. This area and the sides of the neck are
 sparsely spotted with small diamond-shaped
 spots of brownish-black. The belly, inner
 aspect of tibiae + tarsi, and under tail and
 wing coverts, pure white, the latter with the
 terminal 3 or 4 feathers tipped with fulvous and
 inner molting ~~beneath the~~. Beneath the forearm
 are four or five indefinite ^{rows} of very small
 black subterminal shaft streaks. Beneath the
 carpus they are more pronounced and diamond
 shaped. Under surfaces of ^{quills} ^{feathers of} wings and tail (rectrices
 and remiges) white showing the dorsal bars and
 dark and fulvous mottling indistinctly through
 the webs. The outer ^{quill} web of primary (1st)
 is at length fulvous, and the blackish markings
 on that feather and the terminal portion of the
 first four primaries is nearly as strong as
 on the upper surface.

The radiating circle of hair-like feathers around
 the eyes forming the face are pure white.
 except a slight admixture of chocolate-brown
 hairs immediately surrounding the eyelids and
 a good-sized patch of the same, fuliginous
 black in the centre on the inner side.
 The cere is flesh-color; the culmen flesh-color
 or whitish, sided with grayish-olive. The
 bill might be called "horn-color" without micro-
 scopy.

The entire dorsal surface is
 a beautiful yellowish-fulvous, the feathers
 finely mottled with ^{and} black and gray, the rectrices
 and remiges ^{in addition} barred with black; and the
 short feathers with a blackish central area in which
 is a white spot (sometimes white basally, brown-
 ing fulvous apically) forming a beautiful
 series of "eyes" upon a gray and fulvous ground.

The facial ruff, as noted above, is edged
 with black beneath; but this color does
 not extend to the sides or vertex, the circle
 in those parts being of a fine golden-fulvous,
 each feather with narrow black shaft streaks.
 The two circles extend parallel down to the
 base of the cere, but are shorter than and
 concealed by the broad white hair-like
 plumes of the face, which radiate from the
 orbits. The rectrices tail has five ~~dark~~ black
 bars not sharply defined, the basal bar being
 quite indistinct and concealed by the upper
 tail-coverts. The rectrices have a small
 caudate, subterminal ^{black} spot ~~on the tail~~. There
 are also black spots also occur on the lesser
 wing-coverts which are otherwise ^{a rich} fulvous,
 the black spots succeeded by a shade of
 the fulvous color. The dorsum of the gut is
 dull olive; the under surface yellowish;
 claws, dusky-olive. Irides a fine ^{amber} light
 brown when seen in a strong light.
 When the legs are extended the entire foot reaches beyond the tail.

4147 *Aluco flammeus americanus* ♀ juv.
400; 1130; 343; 148; cul + cere, 33; cere 16; cul,
21.5; gape, 14.5; tars, 76; mte, 57; cl, 20;
inner cl, 22; outer cl, 19; hallux cl, 19.

It will be seen from the measurements that this is a fully-grown bird. Its skeleton shows that it is not an aged bird.

I presume that is a bird of the year notwithstanding its apparent maturity. The only adult I have before taken a greed with No. 4146 above, which is much younger nesting (No. 1) taken before the feathers were fully grown agreed with the darker under plumage of this bird and No. 4148 shot the other night (July 27th) from this same place.

It differs from No. 4146 ad. in having no absolutely pure white superficially save on facial circle below bill and on certain parts of rectrices and remiges beneath.

The entire breast, belly under tail, ^{sup}coverts and legs down to the feet are strongly washed with yellow-fulvous. The "face" is washed with vinaceous brown, while the blackish patch on the inner side is larger and more distinct. The dorsal surface only differs in being somewhat darker, as to the ^{and wing} dusky spots, vermiculations and bars. ^{Stomach contained remains of about 1/2} ^{fourteen + hair + bones of rodents.}

4148. *Geeryle alcyon* ♀ ad. In excellent plumage.
352; 583; 167; 106; cul, 61; gape, 72; bare
tib, 12; tars, 13; mte, 25; cl, 9.

July 30th, 1885. Ft. Verde, A. T.

4149 *Aluco flammeus americanus* ♀ juv.
404; 1134; 338; 150; cul + cere, 31; cere 15;
cul, 21; gape, 46; tars, 81; mte 55; cl, 19.
Color of soft parts like No. 4147. ^{Stomach contained a} ^{Gopher.}

4150. *Falco peregrinus naevius* ♀ ad.
462; 1060; 330; 185; cul + cere, 29; cul, 7;
cul + cere, 24; gape, 33; tarsus, 56; mte,

72; mte, 52; ite cl, 21; inner toe + cl, 55;
cl, 22; outer toe + cl, 58; cl, 19; talus + cl, 47;
cl, 19. The characteristic features of the species consist in the short strong tarsus and long slender, but sinewy & powerful toes, which are armed with ^{large} strong claws. The middle toe is ^{longer} than the tip of the lateral claws, not reaching the base of the middle claw. The inner and outer ~~claw~~ toes are equal, the outer toe is somewhat the longest, but the longer claw of the inner making up the difference in the length of the toe + claw together. The iris is of a fine shade of dark brown. The bare skin around eye + cere, greenish-yellow. Bill dark at base, shading to blue-black about the middle. Tarsi + feet, lemon-yellow; claws, plumbeous-black. The lining of the wings (including all the under wing-coverts), here described because more conveniently from a fresh specimen, have dark, ^(varying from under brown to black) short stripes widening into bars which enclose (except laterally) a series of wide oval spots, sometimes tinged washed with brownish-fulvous. The feathers are also tipped with the same. The number of pairs of spots varies with the length of the feathers. The longest have four or five pairs, the shortest only one + are white at base and tip. The under surface of the quills is dark grayish-brown uniform on the outer web, except where showing an occasional indication of the dorsal bars of gray or minute spots, but with a series of pale fulvous spots, elongated laterally on the inner webs; these spots are 7 to 10 on the primaries and 6 or 7 on the secondaries. The white spots never reach the edge of the web, save in one or two of the outer primaries which are worn. The bird is moulted, there being 5 new primaries + 5 new secondary quills. The 4 central rectrices are new. The whole

Dorsal surface is spotted from the nearly equal admixture of new and old feathers. The new feathers (remiges) of wing are the same on both sides - the 5 primaries succeeding the 3rd and 5 middle secondaries; contiguous. Had feasted on Quail, first plucked clean.

Today (July 30th) I rode across the Verde and up Beaver Creek to the large pool in which I saw the St. Domingo Grebe; but a thorough search proved unsuccessful. The bird probably swam to the Verde in the first instance. I hunted carefully up the stream, and saw a W. White-throated Swift (*Cypselus saxatilis*) and a male Lazuli Finch (*Spiza amoena*). The Swifts undoubtedly breed in the cliffs along the Verde, in small numbers; but in Fossil Creek, 25 miles S.W. of Verde, enormous colonies of them propagate. The Lazulis are scarce in the Verde bottom although a few may be found on careful search at any time.

Barn Owl (*Strix flammea americana*) visited the Owl's nest. A single fully-grown young was within. It lay down on its back and seemed to be dead, but I knew better than to attempt to seize it with my bare hands, so stood at 25 yards and fired into the hole killing my bird. It proved to be a ♀ (No. 4149) and young of the year.

The bottom of the cavity was covered with pellets containing bones of such small quadrupeds as *Thomomys talpoides umbrinus*, *Tamias lamarrii* and *Neotoma ~~flavipes~~ ^{albipila}*, together with a quantity of hair and feathers of small birds.

Peregrine Falcon (*Falco peregrinus macrurus*) After leaving the Owl I rode 500 yards up the Verde, and saw a Duck Hawk perched upon a dry pole of a cottonwood. That lay

prostrate near the edge of the River. I rode behind some trees, dismounted, crept to the nearest cover, and took a careful aim at long range. As I did so the bird stood up erect and began to cry, "cah, cah-cah-cah" when I fired and wounded it. Its flight was incredibly rapid. I could scarcely follow its course. I searched the sand and stony bed of the River for an hour before I saw the bird sitting in the shallow water near the further shore, in front of a high bank of clay. I circled around and dismounted near the edge of the bank, and crept stealthily out to the edge of the bank, but no sooner caught sight of the bird than it saw me, and flew, but was dropped to my shot in the middle of the Verde. I waded in and secured my prize, the first in ^{complete} adult plumage that I have taken in Arizona.

Phainopepla nitens. - Families of these birds are met with on the streams. They are living now for the most part, upon insects which they catch upon the wing. They are constantly circling out after them. The young are old and shy and hard to approach. An adult male that I shot was moulting and covered with pinfeathers.

The most characteristic birds along the ^{wooded} streams are the Flycatchers (*Tyrannus vociferans* et *T. verticalis*, *Sayornis sayi* et *S. nigricans*; *Euphonia ~~flavipes~~ ^{insillens}* and *Pyrrocephalus rubinus mexicanus* all of which breed in the Verde Valley in abundance which are constantly in view. Abbott's Towhee, Grasshopper Thrasher, Long-tailed Cat, Mockingbirds, Song Sparrows, Blue Grosbeaks, Western Yellow-throat, Black-throated Sparrows, Lark Finches, Killdeer, Spotted Sandpiper, Great Blue and Green Herons are other characteristic species.

Streptopelia psaltria probably breeds late or irregularly. I have failed to discover its nest.
Gremophila alpestris chrysolaema. - Females of these birds, the adults in very worn and dingy plumage and the adults in spotted dress resort at ^{frequent} intervals to the shore of the Verde for food and water.

Swallows: - The four species which breed in the Verde Valley (in order of abundance) *Petrochelidon lunifrons*, *Stelgidopteryx serripennis*, *Tachycineta thalassina*, and *Pterundo erythrogaster* are all abundant now.

In Strawberry Valley in the pine belt 30 miles east of here the Purple Martin (*Progne subis*) breeds abundantly as it does about Prescott.

July 31st 1885.
 Ft Verde, Arizona.
 Mr. Jordan brought me a fine living male specimen of the Hump-backed Gucker (*Leotostomus xanthurus*). I compared its colors with the description on page 393 and found that they were identical, except that the fins were somewhat rosy, and all the scales upon the sides silver tipped. There were 84 scales in lat. line and 25 in the transverse series between dorsal and ventral. The rows of papillae are irregular on both jaws - about 3 on upper lip, and ten in lower. The fins and parts of skin & scales were mounted on paper & preserved. The front of the skeleton & head were preserved to show the interneural bone, which gives the singular dorsal outline to this Gucker.

Aug. 6th. Ft Verde A. C.

- 4,151. *Myiarchus mexicanus cooperi* ♂ ad.
 252; 360; 115; 108; cul. 28; most, 19.5; gape, 35; tarsus, 26.5; mte, 24; cl., 8. Irides, bright hazel. Bill, black; slight brownish at extreme base of mandible. Tarsus & feet, dusky. Plumbeous, claws, black.

- 4,152. *Myiarchus mexicanus cooperi* ♀ ad.
 240; 345; 106; 97; culum, 28; most, 18.5; gape, 34.5; tarsus, 26; mte, 24; cl., 8. Color same as No. 4,151 above.
- 4,153. *Totanus melanoleucus* ♂ ad.
 Length to end of toes 447; 347; 189; 82; cul., 53; gape, 61; bare tibia 44; tars 53; mte, 43; cl., 6. Irides dark brown. Bill, dusky, - olive at base shading to black. Bare tibiae, tarsi & feet, yellow; claws brownish-black.
- 4,154. *Spiza amoena* ♀ ad. Lazuli Finch.
 145; 126; 73; 59; cul., 18; gape, 11.5; tars., 17; mte 18; cl., 5. Irides, hazel. Bill pale olive brown, flesh, olive below: tarsi & feet, dusky-plumbeous; claws, brown.
- 4,155. *Amiraca caerulea* ♂ ad. Singing delightfully.
 190; 297; 92; 73; cul., 17; gape, 18.5; tars., 21; mte, 22; cl., 7. Irides, hazel. Bill with mandible and maxilla laterally at base, light blue, residue of maxilla, plumbeous-black. Tarsi & feet neutral tint; claws, brownish-black. This specimen and the following, are fine adult birds in worn & worn summer plumage. The colors of the soft parts may be taken as typical.
- 4,156. *Amiraca caerulea* ♂ ad.
 186; 297; 92; 76; cul 18; gape, 18 (both according to comparison above); tars 23; mte 24; cl 6. Colors of soft parts the same as above.
- 4,157. *Accipiter cooperi* ♂ juv. (Stomach empty). (Of the year!)
 430; 753; 234; 208; cul. at cere, 34; cere, 10; cul. 16; gape, 26; tarsus, 62; mte, 53; cl., 14. Irides, pale greenish-yellow. Cere, base of bill greenish yellow. Tarsi & feet lemon-yellow; claws, blue-black. Mrs. Mearns begged for the bird, and I had to give it to her, but preserved the rest of the plumage.
- 4,158. *Spodoptes cucullatus* ♀ ad. Mourning Dove.
 450; 490; 115; 96; cul, 37; gape, 49; bare tibia 9.5; tarsus, 23; mte 29; mte 58; cl., 7.5. Irides, brown. Bill, blackish; orange-yellow at base of mandible. Dorsum and venter

basum of feet & inner side of tarsi, dusky-plumbeous, residual blackish. Molted; feathers scanty, all of the primary & some secondary quills are missing in both wings. There are 8 rectrices on one side of tail & 5 on the other very much faded and worn like all of the old plumage. The measurements are all perfect for tabulation save those of "wing" and "alar expanse". Shot in the Verde River. Totally incapacitated for flight.

Coutopus richardsoni. - First seen. Only one *Myiarchus cooperi* has a loud whistle sounding like "bob white".

1885.

August 12th to 14th Oak Creek, Arizona

Myioidictes

4168 *Empidonax difficilis*. ad. Aug. 14th.
146; 223; 70; 63; cul, 14; ~~gape~~ most, 9; gape, 16; tarsus, 17.5; mte, 15; cl, 6. Irides, hazel. Bill brownish-black above, yellowish flesh-color below; Tarsi feet and claws dusky-plumbeous.

4167 *Coutopus borealis* ad. Aug. 14th.
195; 336; 109; 79; cul, 20; most, 14; gape, 25; tarsus, 16; mte, 18.5; cl, 7. Irides, hazel. Bill with maxilla brownish-black; mandible yellow, same near apex where it shades to brownish-black.

4169 *Myiarchus cinerascens*. ~~*Myiarchus cinerascens*~~ *Myiarchus cinerascens*. ♀ juv. Aug. 14th.
171; 299; 97; 66; cul, 14; gape, 15; tarsus, 23; mte, 23.5; cl, 6.5. Irides brown. Bill yellowish on basal half of mandible; residue, greenish-olive. Tarsi & feet greenish-plumbeous; claws olive brown, whitish on edges and tip.

4163 *Hesperiphonia vespertina*. ♀ ad. Some disease of skin.
202; 345; 112; 71; cul, 20; gape, 22; height 14.5; width at base, 14. Irides hazel. Entire bill bright yellowish-green. Tarsi & feet, pale yellowish-brown; claws, brownish-black. Tarsus, 22; mte, 26; cl, 8.5. Aug. 14th.

4164 *Hesperiphonia vespertina* ♂ juv. Aug. 14th. Blackish on crown.
196; 342; 115; 71; cul, 18.5; gape, 19.5; height 14; breadth, 14; tarsus, 21.5; mte, 26; cl, 8.5.

The bill feet and claws darker than above. The bill greenish-olive, yellowish-green only at extreme base. Tarsi feet & claws, brown.

4165 *Hesperiphonia vespertina* ♂ juv. Aug. 14th. No black on crown.
199; 350; 114; 71; cul, 19.5; gape, 21.5; height, 14.5; breadth, 14.5; tarsus, 22; mte, 26.5; claw, 8. Colors like the one above but a little less dark.

4166 *Gamelodia melanocephala* ♂ ad. Aug. 14th.
217; 335; 107; 90; culmen, 19.5; gape, 20.5; height at base, 13.5; breadth at base, 13; tarsus, 24; mte, 25; cl, 8. Irides, hazel. Bill brownish-black above, bluish, fleshy-olive below. Tarsi feet and claws, plumbeous, the latter dusky.

4160* *Melanerpes formicivorus* ♂ ad. Shot by E. W. M.
247; 460; 145; 94; cul, 24; gape, 29; tarsus, 21; mte, 27; cl, 10. August 13th.

4162 *Gamelodia melanocephala*. - juv. Aug. 13th.
Young of the year.

4161 *Picus villosus harrisi* ♂ August 13th.
247; 408; 127; 85; cul, 30; gape, 32; tarsus, 20.5; mte, 24; cl, 10. Irides, hazel. Bill, neutral tint. Tarsi feet and claws, plumbeous.

4159 *Hesperiphonia vespertina*. ♂ ad. August 13th.
200; 340; 112; 70; cul, 21; gape, 22; height of bill at base, 15; width at base, 15; tarsus, 21; mte, 24.5; cl, 8. Irides, hazel. Bill, bright olive-green. Tarsi and feet, fleshy purplish-brown. Claws, dark brown.

The above specimens (Nos. 4159 to 4169) were all shot on Oak Creek, about 6 miles below Indian Garden. Mrs. Meams, little Lillian and myself were a part of a party of eight, that went fishing to Oak Creek, accompanied by half a dozen enlisted men. We rode to the camp on Oak Creek where I encamped with Lieut. Carrington last winter. The ladies (5)

rode in the spring wagon the gentlemen on horseback. We went into camp about five o'clock. ^{2.0 miles} No Antelope, Deer or other large game was seen en route. The only birds of any interest were Shore Larks, Louisiana Tanager near Beaver Head, which was dry, and one old male Lark Bunting (*Calamospiza melanocorys*) in black plumage, about four miles this side of Beaver Head. Californian Woodpeckers and a *Contopus* (possibly *fortinax*; certainly not *C. borealis*) were flying about some dead trees on Oak Creek in the evening; and Woodhouse's Jays and Lazuli Buntings were numerous from the round needle-like peak of red sandstone to the left of the road, all the way to camp. I caught a mess of "Bony-tails" in the evening, but the Trout would not bite.

On the 13th a part of the party went up the stream a mile or two and fished all day. They only caught one fine Trout and plenty of Bony-tails. Lieut. Eggleston shot a White-backed Skunk (*Conopastea mapurito*). Capt. Baldwin spent the forenoon with the ladies and Tillam fishing and loitering about the Creek and camp. In the afternoon we went fishing and hunting down the stream about a mile or mile and a half. An immature Mexican Black Hawk (*Urochlamys anthracina*) was wounded, but escaped. Evening Grosbeak, Black-headed Grosbeak, Lazuli Finch, Olive-sided Flycatcher, ^{Louisiana Tanager} Hairy and Californian Woodpeckers, Red-shafted Flickers, and Osprey, were seen, and a mess of Bony-tails caught.

On the 14th I walked up to the place where the Skunk was killed, but could not find it. Returning to camp, I shot three Evening and an old male Black-headed Grosbeak, and saw a number of Louisiana Tanagers. After breakfast, I rode across the Creek and found

an Olive-sided Flycatcher that I shot before breakfast, but could not cross the stream to pick up. It had lodged in a tall Sycamore tree that cost me a tough climb.

I started out to Kill Quail (Pambel's) ahead of the rest of the party. I shot an Olive-sided Flycatcher and a ^(possibly *Contopus fortinax*) ~~contopus~~ ^(possibly *fortinax*) ~~contopus~~ that were of interest in the "nutmeg juniper" forest near the "needle bult", when riding up the bed of a dry stream in a wild and interesting locality. The following portion of the trip was without interest, except that ten Antelope were seen and a Soldier shot a Goosander (*Mergus merriami*) and on Beaver Creek at the Post Spring, and wounded another supposed to be of the same species.

As the *Calamospiza* and *Mergus* were the only interesting species found on the trip away from Oak Creek, I will give a Catalogue of the Birds seen only on Oak Creek, which aside from the species mentioned already, is quite as interesting from the absence as the presence of certain species showing the difference in the Avifauna of Oak Creek and the Verde River.

Birds Seen on Oak Creek. (Aug. 12-14, 1885).

- ? *Merula migratoria propinqua*. - I thought I heard one once, but it may have been some other bird.
- Lophophanes inornatus*. - Abundant in small flocks.
- Litta carolinensis aculeata*. - Several.
- Catherpes mexicanus conspersus*. - Several.
- Dendroica aestiva*. - Common. The only Warbler seen.
- Petrochelidon lunifrons*. - Common.
- Pyrranga ludoviciana*. - Common. Families together.
- Geothlypis trichas*. - On the morning of the 13th, just at sunrise, I heard a sharp call much resembling the Flickers both in quality and sharpness of utterance, and saw this bird flying quite high in the air, calling frequently. It alighted on the summit of a tall oak and continued calling.

until shot, when it came hurtling to the ground screaming fearfully, and bit viciously when I caught it. Its bill was olive-green. This was the first I have seen of this gorgeous Grosbeak since I first made its acquaintance in Copper Canon in the spring of 1884, when a single male was singing on some cedars on a mountain side, but could not be procured.

Later in the day other Grosbeaks were seen and heard and, on the morning of the 14th, I shot three in two ^{evergreen} oak-trees at the deserted rancho. They were a female parent and two young males of the season. The female uttered the same note as the male but with less ^{force and} emphasis. She refused to leave her young; but concealed herself so successfully that I was nearly about a quarter of an hour in detecting her in the foliage. When riding through a forest of Nutmeg Junipers on the way home, I again heard Evening Grosbeaks. ~~Molothrus ater obscurus~~ ~~Lanius excubitorides~~ ~~(australis?)~~. - A young female in first plumage was shot in the Nutmeg Junipers near Oak Creek. It is uncertain whether it is *L. australis* or *L. atrata*. The bill and tarsi are considerably larger than in adult males of either species, as given by Mr. Ridgway in his monograph of the genus; but I think it is *L. australis*. The altitude was only about 5000 feet; and it was doubtless hatched in the vicinity - probably in the neighboring cliffs of bright red sandstone.

Stragalinus psaltria. Common.

Chondestes grammacus strigata. A few about the deserted rancho.

Pipilo maculatus megalonyx. Only one seen.

Zamelodia melanocephala. - In families; quite numerous among the evergreen and scrub oaks as well as in the cedars and deciduous trees along Oak Creek. Their call note remind me of the Bluebird's.

Passerina amoena
Guiraca caerulea. - I was much surprised to find this species abundant on Oak Creek, and frequenting the evergreens upon the hillsides quite as much as the deciduous trees (box elder, Alder, Cottonwood, walnut, sycamore, black ash and grape) along the creek.

Sturnella neglecta. - A few.

Aphelocoma woodhousei. - Abundant.

Tyrannus vociferans. - One.

Sayornis nigricans. - On the stream abundant.

Contopus (~~*flaviventris*~~ ^{*richardsoni*}). - One was seen on a tree on Oak Creek and another on the neighboring hillside among some cedars & pines.

Contopus borealis. Quite a number seen; shy.

The habitually perch on the tallest dead trees.

Empidonax

Trochilus alexandri. } Very abundant about evergreen

Selasphorus rufus. } oaks, especially females & young.

Picus villosus harrisi. - Common.

Picus querulus scalaris. -

Melanerpes formicivorus bairdi. - Abundant in flocks, collecting together like Red-heads.

Colaptes auratus mexicanus. - A few.

Buteo borealis calurus. }

Trimmerulus sparverius. } Several seen -

Melospiza anthracina. - An immature bird in brown plumage with much white on tail was wounded on the margin of oak creek, when it sat on a tree. It escaped although seen several times afterwards.

Pandion haliaetus carolinensis. - A nest was seen on a dry tree, and a family of birds were screaming loudly along Oak Creek below our camp.

Ceryle alcyon. - One seen; doubtless breeds on Oak Creek.

Lophortyx gambeli. - Abundant.

Quercedula carolinensis. - Abundant.

Meleagris gallopavo. - A few tracks were seen in the mud along the creek; and

several roosting places were found. The Turkeys were neither seen nor heard.

Mammals seen:-

Tracks of the Black-footed Raccoon were numerous along Oak Creek; and Beaver signs were noticed. A White-backed Skunk (*Conopatus*) was shot in a shady place in the creek bottom by St. Eggleston. *Tamias dorsalis* and *Spermophilus grammurus grammurus* were abundant in the cliffs near Oak Creek. *Tamias harrisi* was abundant before reaching Oak Creek.

San Antelope were seen, returning. Cotton-tail & Jack Rabbits were abundant everywhere.

August 17th Ft Verde, Arizona.

No. 229. *Tamias harrisi* ♂.

Total length, 253 Head and body, 135 Tail to end of vertebrae, 83; hairs, 106; tip of nose to eye, 17; ear, 34; meatus, 36; tip of ear, 43; occiput, 46; Distance between outstretched fore claws, 166 Length to end of outstretched hind leg, 232 Tail, greatest breadth, 46 Chest girth, 90 Belly girth, 110; ears, height above crown, 8 height above meatus, 12; greatest width, 13 Distance between eyes, 20; Manus, 22 Pes, 41 Fore leg, 48 Hind leg, 70 Longest fore claw, 6.5 Longest hind claw, 5.2.

No. 230 *Tamias harrisi* ♂.

Total length, 240 Head and body, 135 Tail to end of vertebrae, 75; of hairs, 100 Tip of nose to eye, 17; ear, 35; meatus, 36.5; tip of ear, 44 occiput, 46 Distance between outstretched fore claw, 163 Length to end of outstretched hind leg, 235 Tail, greatest width, 45 Chest girth, 95 Belly girth, 125 Ears, height above crown 8; above meatus, 19; greatest breadth 13 Distance between eyes, 21 Manus, 25 Pes, 42; Fore leg, 51 Hind leg, 70 Longest fore claw 7 Longest hind claw, 5.3

No. 231 *Tamias harrisi* ♂.

Total length, 255 Head and body, 135 Tail to end of vertebrae, 89; to end of hairs, 111 Tip of nose to eye, 17; ear, 34; meatus 35; tip of ear, 43 occiput, 44; Distance between outstretched fore claws, across shoulders, 166 Length to end of claw of outstretched hind leg, 237 Tail, greatest breadth, 48; Chest girth, 100 Belly girth, 115 Ears height above crown, 8; above meatus, 12 Distance between eyes, 21 Ears greatest breadth, 13 Manus, 24 Pes, 41 Fore leg, 49 Hind leg, 70 Longest fore claw 6.3 Longest hind claw, 6.

August 19th Fort Verde Arizona

No. 232. *Fiber zibethicus* ♂ ad

Total length 434 Head and body, 240 Tail to end of vertebrae, 171; to end of hairs, 185. greatest breadth at same place 7 Tip of nose to eye, 28 centre of pupil, 31; ear, 49 meatus, 5.3 occiput, 61; tip of ear, 64. Distance between outstretched fore claws, 212 Length to end of outstretched hind claws 330. Chest girth, 180 Belly girth 245 Ears, height above crown, 13 meatus, 17; greatest breadth 16 Distance between eyes, 24 Manus 28 Pes 62 Fore leg 67 Hind leg 102 Longest fore claw 9 Longest hind claw 10 Breadth fore foot 10 Breadth hind foot 20 greatest expanse hind foot 42 Claws, white banded with purplish-red

4170 *Salpinctes obsoletus*. ♂ juv. Young of year. 157X 237. Irides hazel. Bill purplish flesh-color on basal one-half of mandible, residue of bill blackish. Tarsi feet & claws blackish.

No. 233. *Vesperugo myotis yumanensis* (H. Allen) ♂ ad.

Total length, 77 Head and body, 39 Tail, 38 Fore arm, 33 Alar expanse, 228; Wing from carpal joint 55 Alar to 5th toe 2 Pes, 8.5 2nd longest claw, 2 Hind leg 22

1885

Tip of nose to eye, 7; ear, 9; meatus, 11; tip of ear
 210; occiput, 15; distance between eyes, 6
 Ear, height above crown, 12 above meatus 14
 Greatest width, 7 Length of anterior membrane-
 process (), 6.6.

August 22nd Ft Verde, A.T.

We have had very heavy and continuous rains.
 The River is high and water settled in large
 areas in depressions. The first ^{Bayer's} ~~Sandpipers~~
^{Fringilla bairdii} ~~Sandpipers~~ (~~Pelidna~~ ^{Fringilla bairdii} ~~alpina~~) were
 seen about one of these ponds at least half a
 mile from the Verde, together with Killdeer.

August 23rd Ft. Verde, A.T.

Numbers of the Sandpipers and Killdeer, were
 about the pool. The Sandpipers utter a harsh
 note like the "English" Snipe.

August 24th Ft. Verde, A.T.

4171. Icterus cucullatus ♀ juv. Young in complete 1st plumage.
 185; 255; 82; 79; cul, 15; gape, 19; tarsus, 21.5;
 mte, 20.5; cl, 6. Irides, hazel. Bill, dusky-oliv
 above; flesh-color below. Tarsi and feet light
 blue (not gray); claws flesh-oliv. First not full plumage.

4172. Oxyechus vociferus ♂ ad.
 258; 508; 165; 98; cul, 21.5; gape, 24; bare tibia,
 17; tarsus, 37; mte 27; cl, 5.2.

4173. Buteo borealis calurus ♂ juv.
 540; 1280; 393; 240; cul. + cere, 35; cere, 14.5;
 cul, 25.5; gape, 45; tarsus, 85; mte 67; cl., 23
 Irides, straw-color. Cere and bare skin along gape,
 light greenish; bill, bluish-gray on ^{greater part of} mandible and
 extreme base of maxilla; residue of bill, plumbeous-black.
 Tarsi and feet, pale greenish-yellow. Claws, blue-black.
 Was eating a Cotton-tail (Lepus sylvaticus arizonae)
 when shot. Had frequented the same spot
 on the bank of the Verde for some time, and
 was always alone. A trace of red on tail.

1885

4174. platycercus.

71; 114; 47; 30; cul, 14; gape, 18; tarsus, 19; mte, 18; cl, 4.5.

4175. Buteo borealis calurus ♂ ad. Fair.
 177; 313; 13; 40; cul, 14; gape, 18; tarsus, 19; mte, 18; cl, 4.5.

Bill, brownish-black. Irides, hazel. Tarsi and feet, brownish.
 Claws, flesh-color. Stomach empty.

4176. Buteo borealis calurus ♂ ad. Fair.
 600; 1370; 425; 240; cul, 35; cere, 14.5; cul, 25.5; gape, 45; tarsus, 85; mte, 67; cl., 23
 Irides, hazel. Bill, brownish-black. Irides, hazel. Tarsi and feet, brownish.
 Claws, flesh-color. Stomach empty.

Stomach contained remains of gophers.

August 27th Fort Verde, A.T.

4177. Sturnus naevius notabilis ♂ ad. Clear Creek.
 161; 255; 83; 62; cul, 15; mte, 11; gape, 18.5;
 tarsus, 19; mte, 18; claw, 4.5. Irides, hazel.
 Bill with maxilla and tip of mandible, dusky-brown;
 residue of mandible, flesh-color. Tarsi and feet, brownish.
 flesh-color; claws, dusky. Tail and in good plumage.

4178. Buteo borealis calurus ♂ juv.
 540; 1290; 410; 270; cul. + cere, 34;
 cere, 15; cul, 23.5; gape, 42; tarsus, 87;
 mte, 64; cl, 23. Irides, straw-color. Cere and bare skin along gape,
 light greenish; bill, bluish-gray on mandible and extreme base of maxilla;
 residue of bill, plumbeous-black. Tarsi and feet, pale greenish-yellow.
 Claws, blue-black. Stomach empty.

To-day, Lieut. Smith gave a lecture in honor of Miss Tarr, at the mouth of the Cañon of Clear Creek. I hunted a mile up the Cañon and

found a line of Cliff Swallows, one of which had been the lair of a ^{Swallow} ~~Snake~~ (~~Helicospira~~ ^{Helicospira} ~~concolor~~ ^{concolor}), and contained a quantity of its excrement. Returning to our camp a flock of 30 Cinnamon Teal saw, and a Water Thrush (*Saurin*), the first I have seen in Arizona, was shot.

August 28th. Ft. Verde, A.T.

4179 *Phalaenoptilus nuttalli*. ♀ ad.

205; 435; 146; 88; cul., 8.5; nost., 6.5; gape, 31; tarsus, 18.5; mte., 22; Cl., 4.5. Irides hazel. Bill + claws, blackish; tarsi, plumbeous; feet plumbeous above, flesh-color below. Shot in a rocky canon.

4180. *Lotanus solitarius* ♀ ad.

Length to end of toes, 462; 211; 405; 136; 56; culmen, 27; gape, 31.5; bare tibia, 22; tarsus, 32; mte., 27.5; claw, 4.5. Irides, brown. Bill plumbeous black. Bare tibiae, tarsi + feet, green; claws, blackish.

No. 234. *Tamias harrisi*. ♀ ad.

Total length, 250; Head and body, 149; Tip of nose to eye, 18; ear, 35; meatus, 35; tip of ear, 43; occiput, 45; end of outstretched hind foot, 222; Ears, height above crown, 6; above meatus, 12; greatest width, 12; Tail to end vertebrae, 80; to end hairs, 101; Mammus, 23; Pes, 39; Fore leg, 48; Hind leg, 67; Longest fore claw, 6; Longest hind, 5.5; Distance between tips of fore claws extended, 163; Distance between eyes, 24; Chest girth, 85; Greatest breadth of tail, 52; Belly girth, 110.

No. 235. *Tamias harrisi* ♀ ad.

Total length, 250; Tail to end of hairs, 100; to end of vertebrae, 76; Head + body, 150; Tip of nose to eye, 17.5; middle of pupil, 22; ear, 34; Meatus, 35; Tip of ear, 42; Occiput, 44; end of outstretched hind foot, 235; Ears height above crown, 6.6; above meatus, 11; greatest width, 11; Mammus, 23; Pes, 38; Fore leg, 48; Hind leg, 65; Longest fore claw, 7

Longest hind claw, 6 Distance between tips of fore claws outstretched, 160 Between eyes, 24 Chest girth 90 Belly girth 115 Tail width, 50.

August 29th Ft. Verde, A.T.

Ceryle alcyon L. - One on the Verde River.

Gallinula chloropus floridana. - One on Beaver

4181. *Tringa bairdi* ♀ ad. Baird's Sandpiper. Length to end of claws, 195; 181; 380; 122; 56; culmen, 24; gape, 24; bare tibia 16; tarsus 23; mte., 22; Cl., 5.

4182. *Tringa bairdi* ♂ ad. Baird's Sandpiper. Length to end of toes, 197; 181; 378; 128; 54; cul., 21; gape, 22; bare tibia, 14; tarsus, 23; mte., 21; claw, 5. Irides dark hazel. Bill, legs feet and claws blackish.

4183. *Tringa minutilla* ♂ ad. Least Sandpiper. Length to end of toes, 160; 143; 279; 88; 45; culmen, 16; gape, 16; bare tibia, 9; tarsus, 18.4; mte., 19.5; claw, 3.5. Irides hazel. Bill + claws, black. Legs + feet, greenish-olive.

4184. *Tringa minutilla* ♀ ad. Least Sandpiper. Length to end of toes, 175; 150; 286; 91; 42; culmen, 19; gape, 18.5; bare tibia, 13; tarsus, 19.5; mte., 20.5; claw 4. Colors of parts like No. 4183.

4185. *Tringa minutilla* ♂ ad. Least Sandpiper. Length to end of toes, 172; 149; 285; 90; 41; culmen, 17; gape, 17; bare tibia 12.5; tarsus, 19; mte., 20; claw, 4. Colors of parts like No. 4183.

4186. *Tringoides macularius*. ♀ juv. Neck still downy.

August 30th, 1885. Fort Verde, Arizona

No. 236. *Taxidea americana berlandieri* ♀ ad.

This specimen was caught away from its burrow. Its gait was slow and awkward as a Skunk's. It was easily overtaken and held at bay while an other man on horseback hunted a club and brained it. Total length, 695. Head and body, 530;

Tail from root to end of hairs, 165; to end of vertebrae, 120.
 Tip of nose to eye, 57; to centre of pupil, 163; to ear, 180; to meatus, 112; to tip of ear, 153; to occiput, 160; to end of outstretched hind leg, 705. Ears, height above crown, 127; above meatus, 155; greatest breadth, 47; Distance between eyes, 39; Chest girth, 340; Distance between outstretched fore claws, 570; Distance between outstretched hind claws, 517. Manus, 102. Pes, 104. Fore leg, 189. Hind leg, 155. Broadest fore foot, 48. Broadest hind foot, 42. Length of 1st fore claw (minor), 28; 2nd, 32; 3rd, 33; 4th, 31; 5th, 28. Length of 1st hind claw (minor), 12; 2nd, 14; 3rd, 16; 4th, 19; 5th, 14.5. Distance from angle of mouth to front of incisor teeth, 37. Width of muzzle, 22. Belly girth, 445. Neck girth, 295; Distance between angles of mouth, 42 mm. Irides, grayish-brown. Muzzle, black. Feet pads dusky, the folds between pads flesh-color. Claws, horn color. Feet & lower part of legs, two broad bands on top of head, involving the eyes, a large triangular patch in front of the ear, dorsum of ears, a part of extremity of lower jaw, and a small patch between ramus of jaws, black. A white ~~patch~~ stripe extending from the muzzle to the root of the tail, through the middle of the back, broadest on head, measuring 25 mm. in breadth on crown, the stripe is twice slightly interrupted on rump - residue of dorsum yellowish ~~gray~~ ^{brown}, grizzled with gray and black. Flanks, axillae, inner side of thighs & inner surface of tail, brownish yellow. A white central band beneath fading into yellow laterally; broadest across center of abdomen, where it measures 100 mm. narrowing in front to a narrow stripe between the arms & blending on the under surface of the neck with the pale yellow of that region, but becoming distinct between the ramus of the lower jaw anterior to the black spot before mentioned. The sides of the head are mixed black, white, brownish yellow together with an admixture of gray on sides of crown. These markings are distributed as follows; the

black dorsal stripes of head above referred to, begin at the muzzle extend ^{backward} ~~posteriorly~~ widening and gradually blending with the grizzled gray, black & yellow pelage of the dorsum. This stripe invades laterally & surrounds the eye and joins a large triangular black patch situated anterior to the ear its apex extending nearly to the angle of the mouth, its base perfectly straight, its anterior border joined to the black lateral sides in the center through the eye and separated from the lateral stripe by two triangular areas of pale brownish yellow, one behind the eye, the apex of the other posterior to the eye, its base corresponding to the line of the upper lip, but extending beyond the angle of the mouth. The pale yellow of neck extends upward to the level of the upper border of the ears, becoming nearly white behind the ear, the inner surface of ear is white, except behind where a patch of the black of the dorsal surface invades it. The upper thirds of the legs are yellow, a few hairs tipped with white, the color gradually becoming glossy black, this color first invading the tips of the hairs and gradually becoming black throughout. The extremity of the tail is blackish but the hairs slightly tipped with gray. The hairs of the dorsum are lustrous yellow for their basal two thirds, then banded with black and pointed with gray. The chin is a mixture of blackish & white hairs, the former prevailing behind, and extending backward forming two stripes corresponding to the ramus of the jaw & fading to yellowish behind.

4187. *Butorides oriscens* ♂ ad.

Length to end of claws, 630. 510; 740. 203; 80; cul, 62; gape, 83; bare tibia, 24; tarsus, 54; nte, 38; claw, 10.

210.337. *Lynx rufus maculatus*. ♂ juv. Skin and skull.

A Catalogue of Birds Collected
On the Trip to San Carlos Indian Agency
with General George Crook in October, 1884.

- 3361 *Ceryle montezumae* ♀ juv.
3362 " " ♂ juv.
3363 " " ♂ juv.
3364 *Myadestes torquatus* ♂ ad. No measurements.
3365 *Asio columbianus* ♀ juv.
3366 *Accipiter fuscus* ♀ juv.
3367 *Pyraura hepatica* ♂ ad.
3368 *Circus hudsonius*
3369 *Myadestes torquatus* ad.
3370 " "
3371 *Picus villosus harrisi* ♂ ad.
3372 *Junco dorsalis* ♂ ad.
3373 *Columba fasciata* ad.
3374 *Picicorvus columbianus* ♂ ad.
3375 *Regulus satrapa* ♂ ad.
3376 *Parus montanus* ♀ ad.
3377 *Sphyrapicus thyroideus* ♂ ad.
3378 *Buteo borealis calurus* ♀ ad.
3379 *Sphyrapicus varius nuchalis* ♂ juv.
3380 *Sitta pygmaea* ad.
3381 *Gymnocitta stelleri maculosa* ♀ ad.
3382 " " " ♂ ad.
3383 *Picus pubescens gairdneri* ♂ ad.
3384 *Corpodacus cassinii* ♂ ad.
3385 " " ♀ ad.
3386 *Zonotrichia leucophrys* ♂ ad.
3387 *Sphyrapicus varius nuchalis* ♂ ad.
3388 *Aphelocoma sordida arizonae* ♀ ad.
3389 " " " ♂ ad.
3390 *Myadestes torquatus* ♂ ad.
3391 " " "
3392 *Columba fasciata* ♂ ad.
3393 *Aphelocoma sordida arizonae* ♂ ad.
3394 *Pyraura ludoviciana* ♂ juv.
3395 *Myadestes torquatus* ♂ ad.
3396 " " ♀ ad.

- 3397 *Myadestes torquatus* ♂ ad.
3398 *Gymnocitta* ♀ ad.
3399 *Melanerpes formicivorus* ♀ ad.
3400 *Myadestes torquatus* ♂ ad. No measurements.
3401 *Myadestes torquatus* ♂ ad.
3402 *Cinnyris ornatus* ♀
3403 " " ♀
3404 " " ♀
3405 " " ♀
3406 *Sphyrapicus varius ruber* ♂ ad.
3407 *Gymnocitta cyanocapitata* ♂ ad.
3408 " " ♀ ad.
3409 *Aphelocoma woodhousei* ♀ ad.
3410 " " ♂ ad.
3411 *Junco oreganus* ♂ ad.
3412 *Colaptes auratus mexicanus* ♂ ad.
3413 *Junco oreganus* ♀ ad.
3414 *Columba torquatus* ♂ juv.
3415 *Centurus uropygialis* ♀ ad.
3416 *Zonotrichia leucophrys* ♂ juv.
3417 *Passerculus sandwichensis alaudinus* ♂ ad.
3418 *Centurus uropygialis* ♀ ad.
3419 " " ♂ ad.
3420 " " ♂ ad.
3421 " " ♂ ad.
3422 *Sphyrapicus varius nuchalis* ♂ juv.
3423 *Fringoides macularius* ♀ juv.
3424 *Junco oreganus* ♂ ad.
3425 *Totanus melanoleucus* ♀ ad.
3426 *Ardea herodias* ♀ ad.
3427 *Thryomanes bewickii leucogaster* ♀ ad.
3428 *Cardinalis virginianus phoeniceus* ♂ ad.
3429 *Centurus uropygialis* ♂ ad.
3430 " " ♀ ad.
3431 " " ♀ ad.
3432 *Pipilo aberti* ♀ ad.
3433 *Geothlypis trichas occidentalis* ♂ juv.
3434 *Buteo borealis* ♂ juv.
3435 *Circus hudsonius* ♂ juv.

- 3436 *Timunculus sparverius* ♀ juv.
 3437 *Phainopepla nitens* ♂ ad.
 3438 *Salpinctes obsoletus* ♀ ad.
 3439 *Calamospiza melanocorys* ♂ ad.
 3440 " " ♂ ad.
 3441 " " ♂ ad.
 3442 *Cardinalis virginianus igneus* ♂ ad.
 3443 *Asyndesmus torquatus* ♂ ad.
 3444 " " ♂ juv.
 3445 *Centurus uropygialis* ♂ ad.
 3446 " " ♂ ad.
 3447 " " ♂ ad.
 3448 *Accipiter fuscus* ♀ juv.
 3449 *Campylorhynchus brunneicapillus* ♂ ad.
 3450 " " ♀ ad.
 3451 " " ♀ ad.
 3452 *Thryomanes bewicki leucogaster* ♀ ad.
 3453 *Poliophtila plumbea* ♂ juv.
 3454 *Centurus uropygialis* ♂ ad.
 3455 *Pyrrocephalus rubinus mexicanus* ♂ ad.
 3456 *Centurus uropygialis* ♀ ad.
 3457 *Phainopepla nitens* ♂ ad.
 3458 *Asyndesmus torquatus* juv.
 3459 *Centurus uropygialis* ♀ ad.
 3460 " " ♂ ad.
 3461 *Calamospiza melanocorys* ♂ ad.
 3462 *Accipiter cooperi* ♂ ad. juv.
 3463 *Geothlypis trichas* ♀ ad.
 3464 *Myiadestes townsendi* ♂ ad.
 3465 *Oreoscoptes montanus* ♀ ad.
 3466 " " ♂ ad.
 3467 *Melanerpes formicivorus* ad.
 3468 " " ♀ ad.
 3469 *Asyndesmus torquatus* ♂ ad.
 3470 " " ♂ ad.

1 metre = 39.368 Am. inches.

1 metre (= 1000 m m.) = 39.368 inches.

1 metre (= 1000 m m.) \div 39.368 inches = 25.4 000 + m m.

Therefore 1 inch = 25.4 m m.

.01 of an inch = .254 m m.

Therefore to reduce inches and hundredths to milli-metres,
multiply by 25.4 and the result will be practically correct.

Thus 1.75 (in.) \times 25.4 (m m.) = 44.45 m m.

